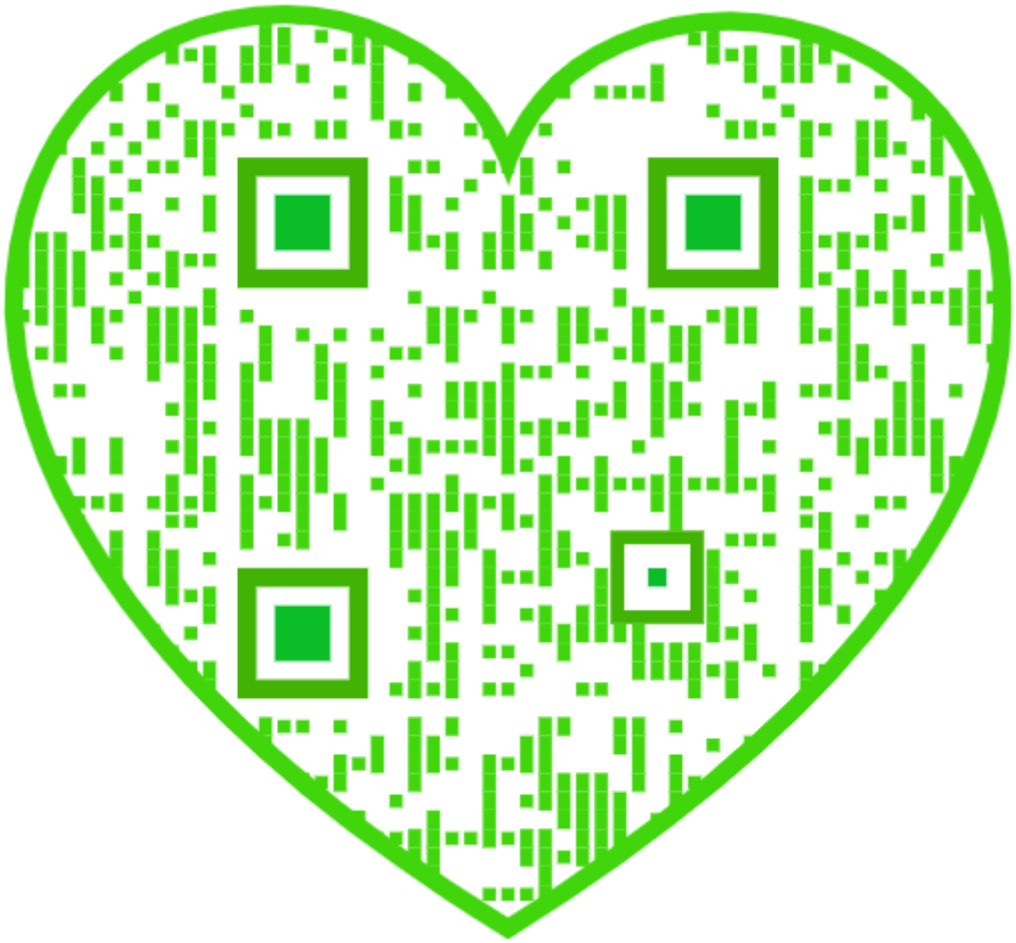

THE ARCHITECT

VOLUME XI · NUMBER 1
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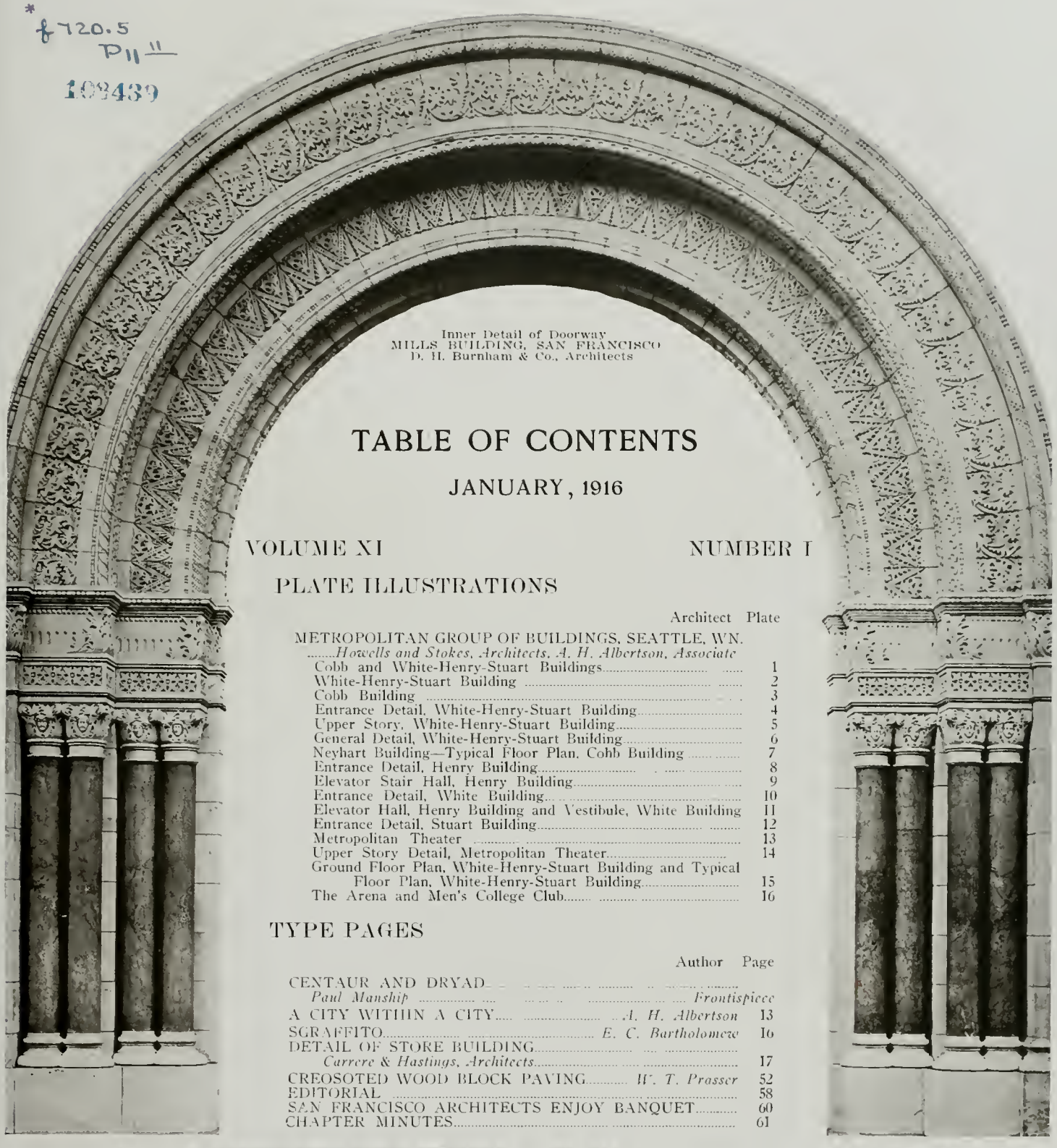

Inner Detail of Doorway
MILLS BUILDING, SAN FRANCISCO
D. H. Burnham & Co., Architects

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Clarence P. Kane, Editor

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Telephone Douglas 3424.

CENTAUR AND DRYAD

PAUL MANSHIP, SCULPTOR

THE ARCHITECT

VOL. XI. SAN FRANCISCO, JANUARY, 1916 NUMBER 1

GENERAL VIEW OF THE WHITE-HENRY-STUART BUILDING AND THE COBB BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

A City Within a City.

BY A. H. ALBERTSON

THE building up of the University Tract by the Metropolitan Building Company is probably the largest development of its kind undertaken in any part of the world in modern times. The buildings are located on a tract of land about ten acres in area in the midst of the condensed business section of the City of Seattle. The ten-acre tract is owned by the University of Washington and leased by the Metropolitan Building Company for a term of fifty years. About ten years ago Mr. J. F. Douglas obtained an option from Mr. James A. Moore on the ten acres now known as the University Tract. In conjunction with Mr. C. F. White, the first president, the Metropolitan Building Company was formed, having a capital of $5,000,000. The lease was bought from Mr. Moore at a valuation of $250,000. The rentals payable to the University are $15,000 for the first period of the fifty years; $40,000 for the second; $80,000 for the third; $100,000 for the fourth, and $140,000 per year for the last period of the fifty years. At the expiration of the fifty years the entire property, including the buildings and all other improvements, under the lease will be turned over to the Regents of the University of Washington as a well co-ordinated and extraordinary unit of great size in the heart of a great city.

The property is bounded or intersected by five city streets and various alleys; it has twelve blocks of street frontage, totaling nearly a mile in length, and contains a small centralized plaza. When the property was taken over the only improvement upon the land was the existing Post Intelligencer Building, aside from the old, original University Building demolished several years ago. Aside from the Post Intelligencer Building, the Tract at that time had but one street adjoining it, and the natural ground level averaged about twenty feet above the present grades. The leveling of this plateau called for the removal of 10,000,000 cubic feet of earth at great expense. University street, Seneca street, Fourth avenue and Fifth avenue, were channeled down and paved by the building company, and this, together with the removal of the plateau and the erection of the various buildings now on the Tract, has called for an outlay of upwards of $3,000,000. The full development of the property in accord with the original comprehensive plans covering ten acres, adopted before any work was done upon it, contemplated a total expenditure of $10,000,000. The magnitude of the enterprise as above indicated, together with the variety of the activities now carried on within the boundary of the Tract make clear the reference to the evolution of the University Tract some years ago by the late George H. Emerson, that "The completion of the Metropolitan developments will produce in effect a city within a city. No greater task has fallen to any body of men, no greater chance to ac-

complish great results with few mistakes. Symmetry, beauty, adaptability and economy in construction should be easy to attain under these conditions. It is seldom given to any group of city builders to act as a unit in the building of the very center of a large city; seldom that a tract of so many acres can be found unimproved with the retail district of 200,000 people bounding it on two sides, and a better portion of the residence district abutting on the other two sides."

Immediately after the purchase of the lease by the present owners, a careful study was given to its development on a comprehensive scale, looking through the full term of the lease as far as possible. Mr. Douglas, the manager of the company, states his method of procedure in the following way:

"I had had considerable experience in building, and I had come in contact with Howells and Stokes of New York, one of the leading firms of architects in this country. We arranged to have Mr. Stokes, of the firm of Howells & Stokes, visit Seattle for the purpose of making us suggestions for development of the property. Mr. Stokes brought with him at the time he came to Seattle, Mr. Harry Hall, at that time in charge of the Stokes' properties in New York City. Mr. Hall was an experienced and successful real estate manager. Mr. Stokes and Mr. Hall reached Seattle in October, 1907, and made a thorough study of our property on the ground. During the next couple of months they prepared a comprehensive scheme for the development of the property that would ultimately call for the expenditure of from seven to ten millions of dollars. The principal features of the plan were that the property should be developed with a common skyline, and with material that would be harmonious, and with an architectural treatment of the buildings that would also be harmonious. A small plaza was to be laid out in the center of the property, around which the buildings were to be grouped.

ELEVATOR HALL, HENRY BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

"When the drawings, which were quite elaborate, reached Seattle, they were exhibited in one of the hotels. Many people looked at the drawings, but they considered the proposed development as a sort of a pipe-dream—a scheme that was pleasant to contemplate, but that there was no expectation of realizing."

The accompanying reproductions, showing the advanced development to date, make clear the remarkable progress of the original ideal, and vindicate the foresight, capacity and courage of those who conceived it and carried it forward.

If the complete development of the University Tract is continued with approximately the same character of Class A fireproof construction used in the permanent buildings already erected, the amount of materials installed will be great. The weight of the Stuart Building, the latest fireproof office building constructed, is over ten thousand tons. The total weight of building materials necessary to cover the entire Tract as now contemplated will be in the neighborhood of 150,000 tons.

The original architectural planning of the ten acres available was made on the assumption that the business section of the city would envelop the property. This has already come to pass. In the center of the Tract a small plaza was established to act as a focus or climax of the property as far as the planning of the ground was concerned. The controlling features of the general design for all the buildings are a uniform skyline, a uniform face material, and a closely related form of architecture for the various buildings. To be sure different buildings are given distinction or individuality by major elements of design as well as by a constant change in detail from one building to the other. The close relationship in the style of the different buildings, together with the use of uniform exterior materials—brick and terra cotta, form the main and it may be said sufficient basis, for the common bond of unity between the different structures. It is variation in detail from one building to the other that prevents monotony and gives that live interest that unfertile repetition could not for a moment inspire. The pediments on the cornice line vary from one building to the other. The entranceway to each building is distinctly individual within the same style, and the main consoles of the entablature, while performing the same function in the different cornices are individual in modeling.

The height of the ground floor is gradually decreased by the upward pitch of the street grade, and when the height becomes a little low for a ground floor story, the second story is added to the height of the ground floor. At this transition point a mezzanine is installed a bay or two wide in order to make an easy stage between a low ground floor to a very high ground floor.

White Building: This building was the first permanent structure to be erected on the Tract. The general construction of the White Building is steel frame work with

ARCADE IN WHITE BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate
Shows one stretch of the arcade and public corridor in the ground floor running from one street front to the other through the space at the rear of the elevators for the purpose of enhancing the value of the space.

reinforced concrete floor slabs. The entrance is placed on the corner to satisfy tenants that might take space on either street front of the building. Incidentally, this position of the entrance at the corner made it possible to place the elevators, toilets and stairs in the less lighted, and therefore less valuable parts of the building, preserving the best space for renting purposes.

Difficult soil conditions were encountered under one part of the building, and the proximity of the Great Northern Railroad tunnel made it necessary to investigate the bearing power of the soil. From one test bore soft material was taken out that settled two inches in twenty-four inches in being dried out, indicating that if too much water were drained out from the soil under the building by tunnel or other drainage, settlement might be expected. During the construction of the Great Northern tunnel one building several blocks away started to settle and was thereafter held up to its position on hydraulic jacks until the tunnel was completed. In another building the center of the cellar settled several feet but did not affect the foundations. During the construction of a sewer tunnel deep under Queen Anne Hill the ground at the surface settled about six inches over a very large area. The material which settled over this area was a great many times more than the material taken from the tunnel, indicating that it was the withdrawal of the water that allowed the material to shrink. It was necessary to go into questions such as these before the White Building was constructed.

Architecturally the horizontal runs through from one building to the other are given variation by the vertical lines of treatment. The diagonal fluting of the main corona bands is rather characteristic and individual and affords a simple method of enriching a surface otherwise severely plain.

It was naturally thought that special, modeled curved bricks would be necessary with which to build the curved corner. It was eventually decided, due to the rather mottled color of the brick, that straight brick could be used without being noticed, and this proves to be the case. It is practically impossible by looking at the corner to see that it is laid up with straight bricks.

Henry Building: The column centers of the Henry Building are a little less than the other buildings. This was brought about by the fact that after the White Building plans were made and before construction was commenced, Union Street was widened five feet by the city. Accordingly, the White Building was moved five feet and this five feet was taken out of the future dimensions of the Henry Building. The narrow bays in the Henry Building also serve the purpose of giving variety in the width of offices when compared with the Stuart and White Buildings adjoining. The plan of the Henry Building is U-shaped, while that of the two adjoining office buildings is L-shaped. A glance at the general plan of these three buildings herewith produced will show the manner in which the courts have been established to assure light for all of the wings of all the buildings. The Henry Building has two stairways which is the number that each of the buildings would be required to have if

Continued on Page 18

WOMEN'S UNIVERSITY CLUB, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate
A temporary building planned by the Metropolitan Building Co., especially for the Women's University Club. Only 25 feet wide and adjoins the College Club Building. The design, it will be noticed, is more effeminate than that adopted for the Men's College Club.

"Sgraffito" in America.

By E. C. BARTHOLOMEW

THOUGH one of the oldest of the arts, Sgraffito has been comparatively little used in America. The Alexander building on Fifth Avenue, New York, is perhaps the best known example of this work, though McKim, Mead and White, as well as Carrere and Hastings have executed notable examples.

The late Stanford White is credited with saying "Sgraffito, properly understood and competently executed, is the missing link in architectural design,—the only means which makes possible the harmonious relation of large and small masses and color."

The Italian word Graffiato, or as it is commonly called, Sgraffito, means "scratched". It seems to be the most ancient of all the forms of art endeavor. The early Etruscians scratched designs on their pottery cutting through the surface coat and leaving the design outlined on a background. This form of decoration was used in Italy through all of the early periods and its scope enlarged and extended until in the Renaissance period we find a fully developed art. Many Italian palaces about the end of the fifteenth century have Sgraffito decorations. They are incised and appear as though drawn with a bold line on the plain surface of the walls. Palazzo Torrigiani at Florence is an interesting example.

Technically, Architectural Sgraffito is the form of decoration which is produced by scratching or scoring the surface of fresh plaster so as to reveal a surface of a different color underneath. It is a decoration which gives both form and color.

By its peculiar nature it compels the work to be executed on the job. The studio must be exchanged for the scaffolding and the result bears the imprint of the master's own hand and should justify the inconvenience. It requires a quick, sure hand. The surface coat sets in a comparatively short time and the artist must work against time. The very tension under which he works gives a strong, vital energy of line, under the master's hand.

The technical difficulties are many: The exact consistency of the outer coat to facilitate a proper working, the color of the under coat when it shall have been disclosed, the strength and durability of each under weather conditions, the disastrous effect of cracking in either coat, are all problems for which satisfactory solutions can be assured only by practical experience, and these may all vary under different climatic conditions.

"I needed twenty years' of experience," said Maximilian F. Friedrang, who executed much of the work of McKim, Mead and White, "and much courage, for my later achievements in Sgraffito, every day furnishing new and valuable information."

The mechanical process of executing a piece of work lies in the preparation of the coats of plaster in such a way that the under coat shall have a good surface and color where displayed by the removal of the outer coat, and that the outer coat shall have a slow setting consisteney which allows of its being carefully worked while in a proper condition. The chemical action and reaction between the component parts of the plaster, the receiving surface, and the color, must all be studied with reference to the strength and durability of the plaster and the permanence of the color.

PALAZZO TORRIGIANI, FLORENCE
Italian Palace with Sgraffito Decoration

Some workers consider that cement is necessary to withstand the rigors of our eastern and northern climates, but say that when used without lime it sets too rapidly to permit time for scratching and is likely to develop hair cracks. Another claims that "one handful of cement or plaster of Paris in plaster is destructive to the durability of any fresco or Sgraffito work." In disproof of this we are told that cement was used freely in the work on the Alexander building with apparent permanence in results.

We are told that in Italy where the lime was used to the exclusion of cement, it was seasoned underground for a year after slaking, with the result that plaster made from it remained soft and cheeselike for several days; also that some

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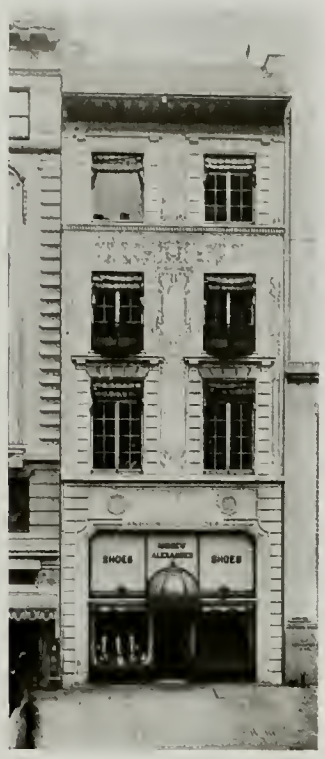

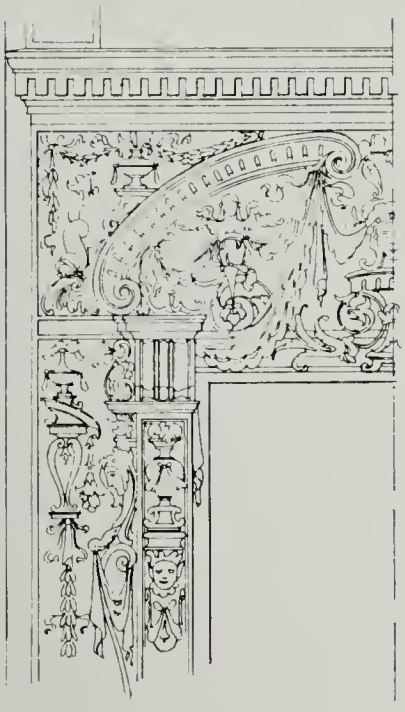

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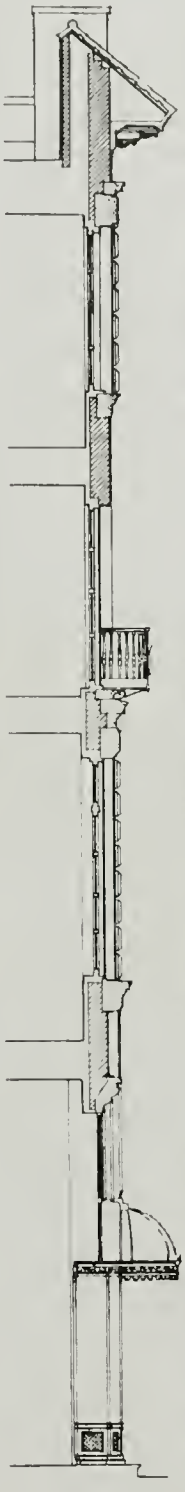

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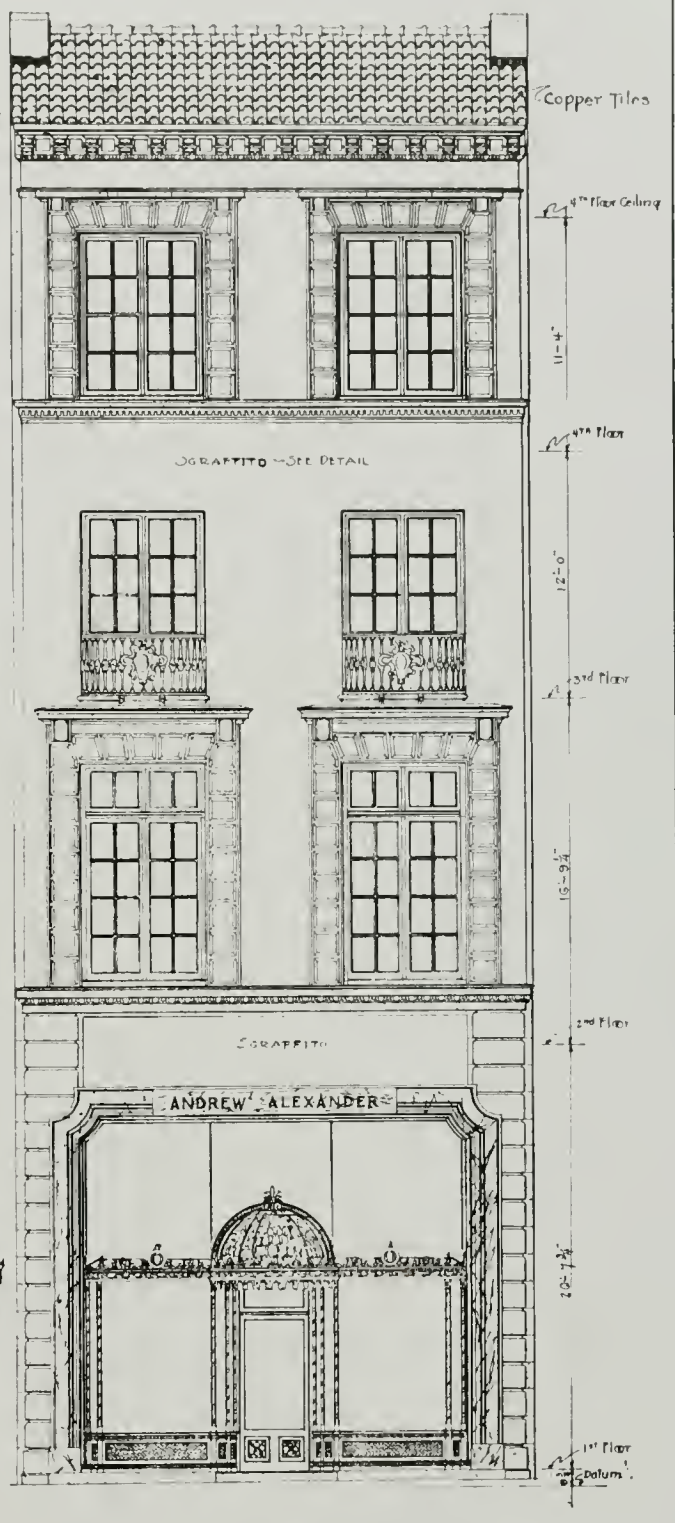


ELEVATION
SCALE 1/8"=1'-0"

STORE BUILDING - 546 FIFTH AVE., N.Y.C.

CARRÈRE & HASTINGS, ARCHITECTS, NEW YORK CITY

DRAWN BY H.B.PURDY.

VIEW SHOWING PROPOSED DEVELOPMENT OF THE PLAZA IN THE CENTER OF THE METROPOLITAN TRACT
Howells and Stokes, Architects, A. H. Albertson, Associate
At the upper end the central feature of the plaza is shown as a shaft of porphory crowned by an historic Corinthian cap. A quiet fountain is shown at the base and around the outer rim is a small space for gardening. Behind this central feature is a new building, plans for which are being made. This building is to be occupied by one concern. Part of The Arena just completed shows at the left and the Metropolitan Theater is shown at the right.

A CITY WITHIN A CITY

Continued from Page 15

the corridors did not connect through from one building to the other; so that in the total block front of these three connecting buildings, two less stairs are installed than would be required if the buildings were not connected. This is an instance of the economy of construction under one general plan referred to.

Stuart Building: This building is one of the first high-class office buildings throughout the country that has eliminated steps at the main entrance by means of an inclined entrance-way. This treatment has been used in department stores, theatres and other kinds of buildings, but has rarely been used in entrance-ways to first-class office buildings. The result is so satisfactory that probably very few people notice that steps have been eliminated by the introduction of inclines. The building is also characteristic in that the difference in levels of the sidewalks surrounding the building have been taken up by means of steps in the center of the ground floor instead of by steps into the building from the sidewalk. The theory is that people once within a building do not notice change of levels by means of steps as they do when the steps are placed at the street entrances.

A totally new departure was tried out in the court of the Stuart Building where the light might be a little less in the lower stories than in the upper stories. The windows of the lower part of the building are made wider than the upper part. It might be expected that a sense of weakness would be produced at the bottom by this treatment, but no such impression is observable.

A distinct variation in the heating installation was undertaken in this building. Through experience it has been found that the sides of a building facing the sun use less heat than those in the shade. Based on this determination the heating system is devised so that the heat may be turned off from any sunny side and maintained on the shady sides of the building.

A new form of fire escape was introduced which is now known as the "Howells & Stokes fire escape." Its essential features are a narrow balcony two feet wider on each side than the window or windows opening onto it; and, along one side of any window, a ladder extending down to the balcony one story below. From there down to the next story the ladder is on the opposite side of the balcony. Along the outer edge of the ladder and at the back of the ladder heavy wire mesh extends from one balcony to the other. So that in descending this fire-escape, the face is always towards the wall; the outer edge is always protected by metal grill or wire mesh, the back is similarly protected and so close in fact that one descending may stop and lean backward against it. In case a person should fall it can never be more than one story.

Cobb Building: This building is a specalized medical building from bottom to top. It is frequently spoken of as the best equipped building of its kind in the country. The speed and economy with which the building was constructed after the plans were completed, is proof of careful planning and ripe conclusions. The owners spent

Continued on Page 51

MAIN STAIRWAY, METROPOLITAN THEATER, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

GENERAL VIEW OF COBB BUILDING AND THE WHITE-HENRY-STUART BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

WHITE-HENRY-STUART BUILDING, SEATTLE

Howells and Stokes, Architects, A. H. Albertson, Associate

From these three buildings it will be seen that the detail is designed to be in scale with the completed trio structures rather than with any one of the three buildings. The manner of turning the second story of the White Building into the upper part of the ground floor of the Stuart Building is observable. The increased supporting effect given to the cast iron work on the ground floor by being painted white is apparent. A glance at the street traffic and surrounding structures makes it seem incredible that this development has taken place in 7 years time, from a small field of grass 20 ft. in the air with a few fir trees upon it, to paved city streets carrying heavy traffic.

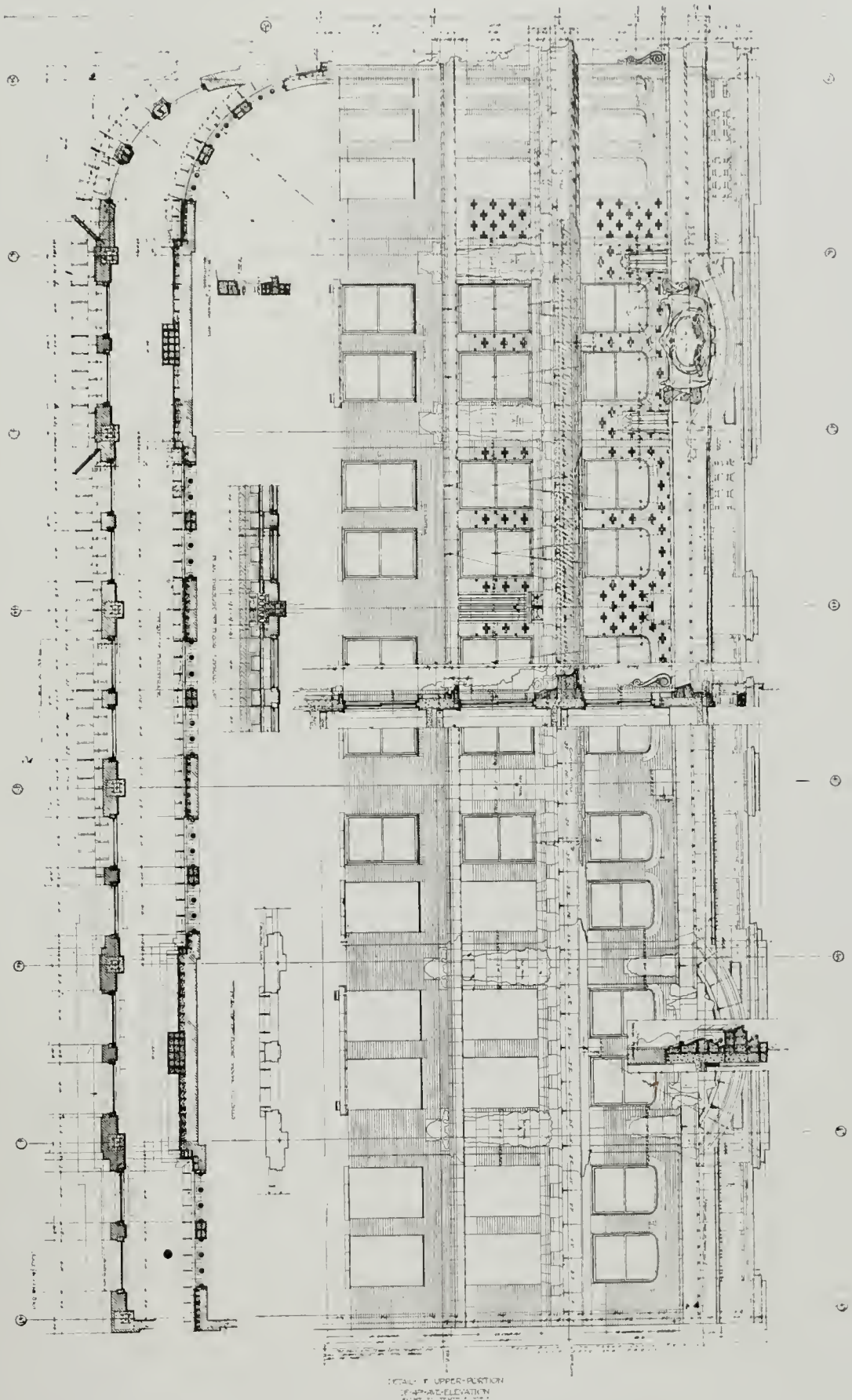
COBB BUILDING, SEATTLE

Howells and Stokes, Architects. A. H. Albertson, Associate

This building was constructed for strictly medical uses and is probably the most highly specialized medical building in the country. Each suite is designed to fit the particular needs of the doctor or dentist occupying it. The building contains about two dozen related businesses and facilities such as specialized baths, gymnasium, pharmacy, physicians' and dentists' labortories; supply houses; nurses registry; roof garden; public operating room; and similar conveniences.

ENTRANCE DETAIL, COBB BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

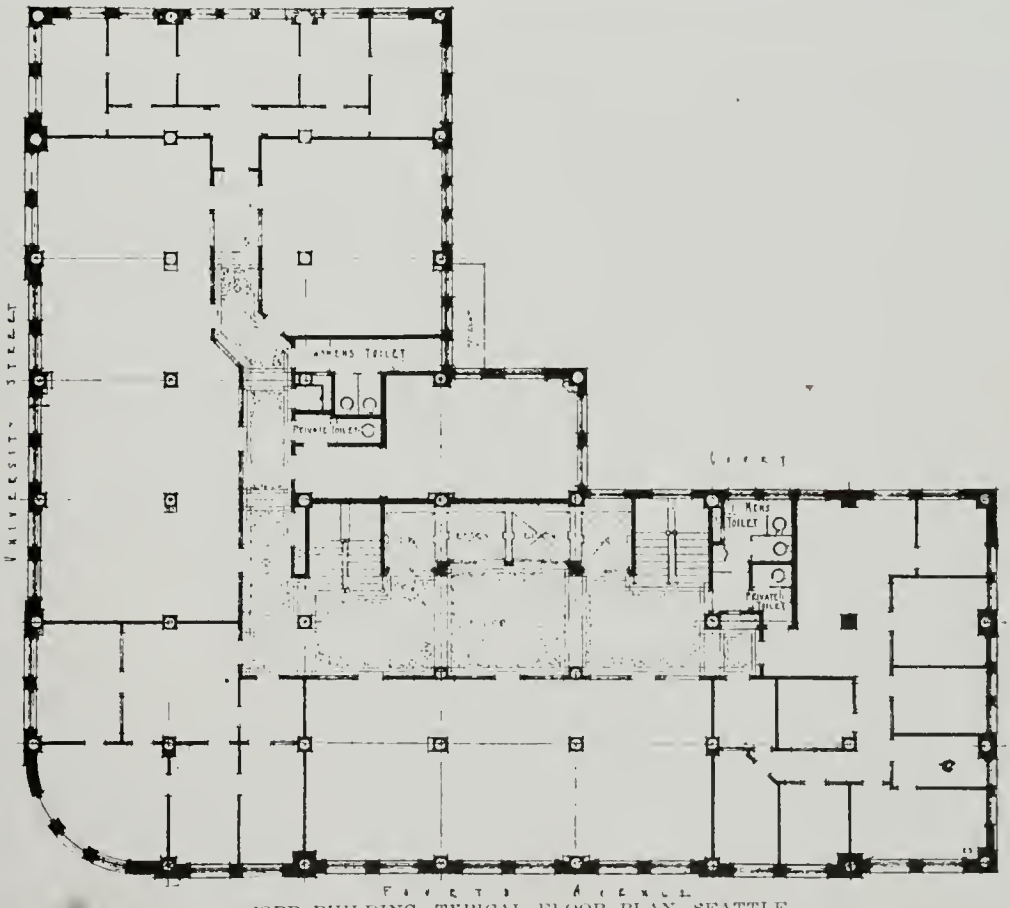
DETAIL OF UPPER STORIES OF COBB BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate



GENERAL DETAIL OF COBB BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

NEYHART BUILDING AND METROPOLITAN THEATRE, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

This photograph is reproduced with the idea of showing the character of buildings that are erected by the Metropolitan Building Company for temporary uses and until such time as permanent fireproof buildings are erected



COBB BUILDING, TYPICAL FLOOR PLAN, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

This plan is shown primarily to illustrate the structural arrangement. A few office suite layouts are indicated. A large elevator hall is more desirable than in an office building ordinarily, the travel being slower. This building was constructed to be extended on 4th Avenue at some future time. The two private toilets to be rented preferably to space adjoining, are placed against two public toilets for economy of installation, and also to leave other space more flexible. If these private toilets were put elsewhere, they probably would interfere with the possibility of making the adjoining suites larger or smaller.

ENTRANCE DETAIL OF HENRY BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

ELEVATOR AND STAIR HALL OF THE HENRY BUILDING, SEATTLE
Howells and Stokes, Architects. A. H. Albertson, Associate

The main entrance comes in at the right, not shown in the photograph. The stairs go up far into the hall at the left. The floor treatment is in Italian marble panels bordered by black and white marble work, the field is of terrazza, and the sidewalls are of Italian marble. The bottom line of the photograph is the axis of the main hall.

ENTRANCE DETAIL OF WHITE BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

ELEVATOR HALL OF HENRY BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

The main entrance is directly across the hall from the elevators. Stairs start at the right at each end of the hall. The floors are in marble and mosaic border with terrazza panels. The side walls are Italian marble.

VESTIBULE OF WHITE BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

Italian and Verde Antique marbles are used as the finish. The quartered dome over the niche at the left is finished in mosaic work.

ELEVATOR HALL OF HENRY BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

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VESTIBULE OF WHITE BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

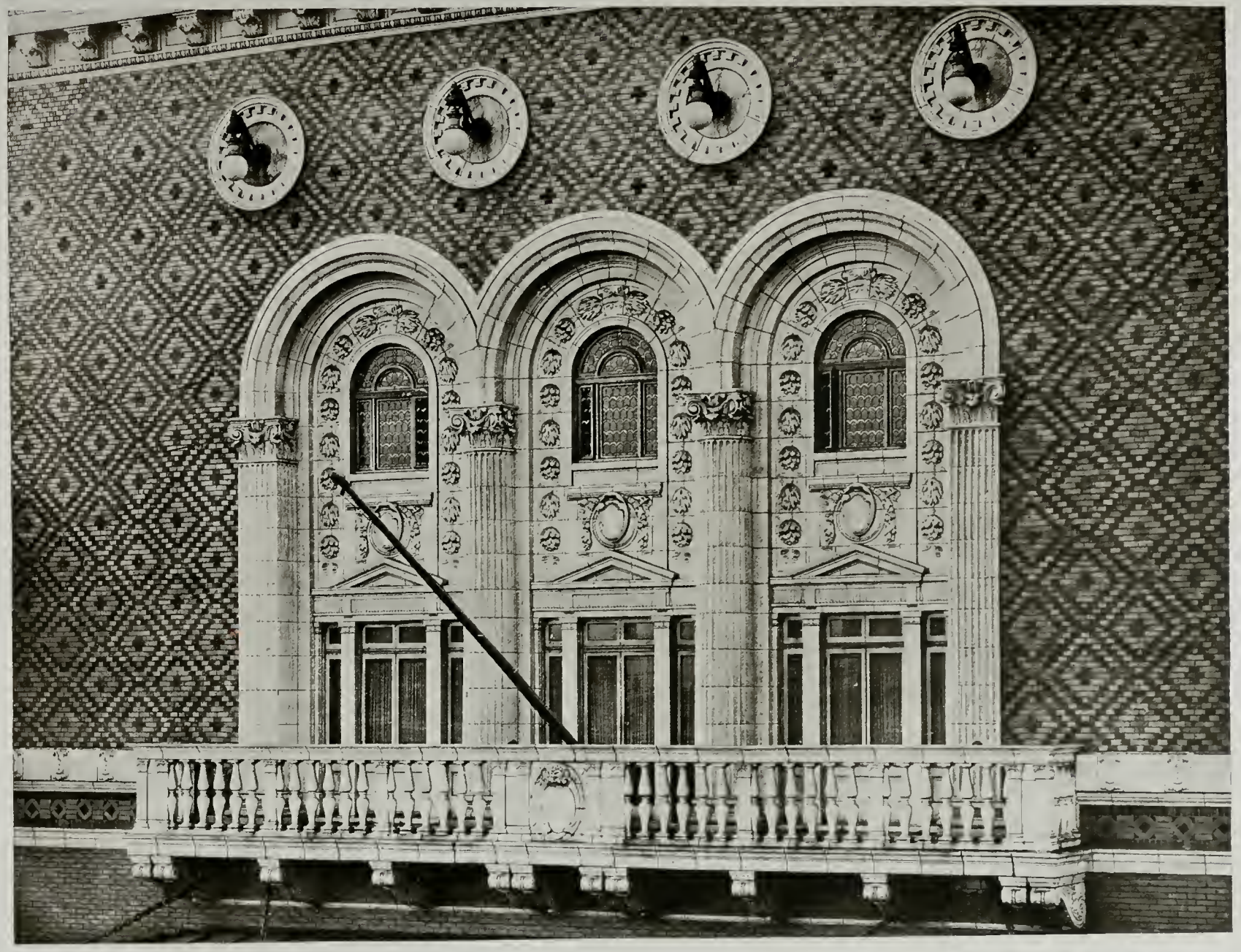
Italian and Verde Antique marbles are used as the finish. The quartered dome over the niche at the left is finished in mosaic work.

ENTRANCE DETAIL, STUART BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

METROPOLITAN THEATRE, SEATTLE

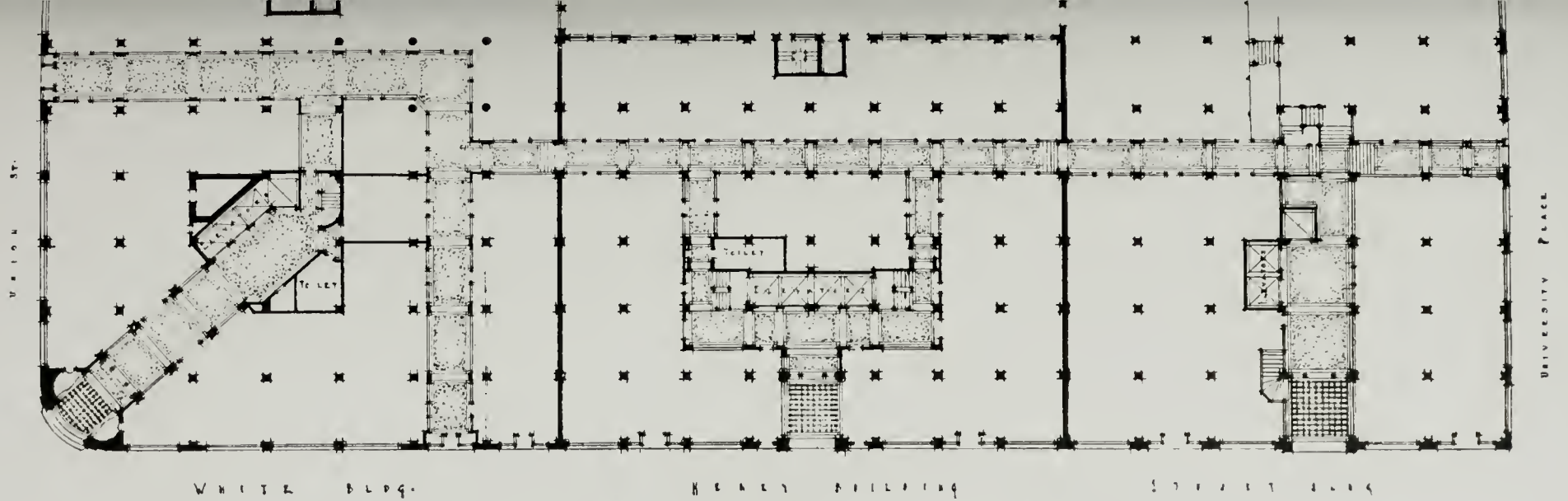
Howells and Stokes, Architects, A. H. Albertson, Associate

The Metropolitan Theater is 84x129 ft. in plan, and seats about 1600 people. The stage is made removable and is sufficiently large to accomodate a play like Ben Hur. The plan and interior form of the building were given their shape by the application of the principles of acoustics. The ornament of the exterior is concentrated in one central feature, the remaining part of the facade being treated in simplicity and refinement of line with the purpose of breaking away from the usual custom of over-ornamentation.



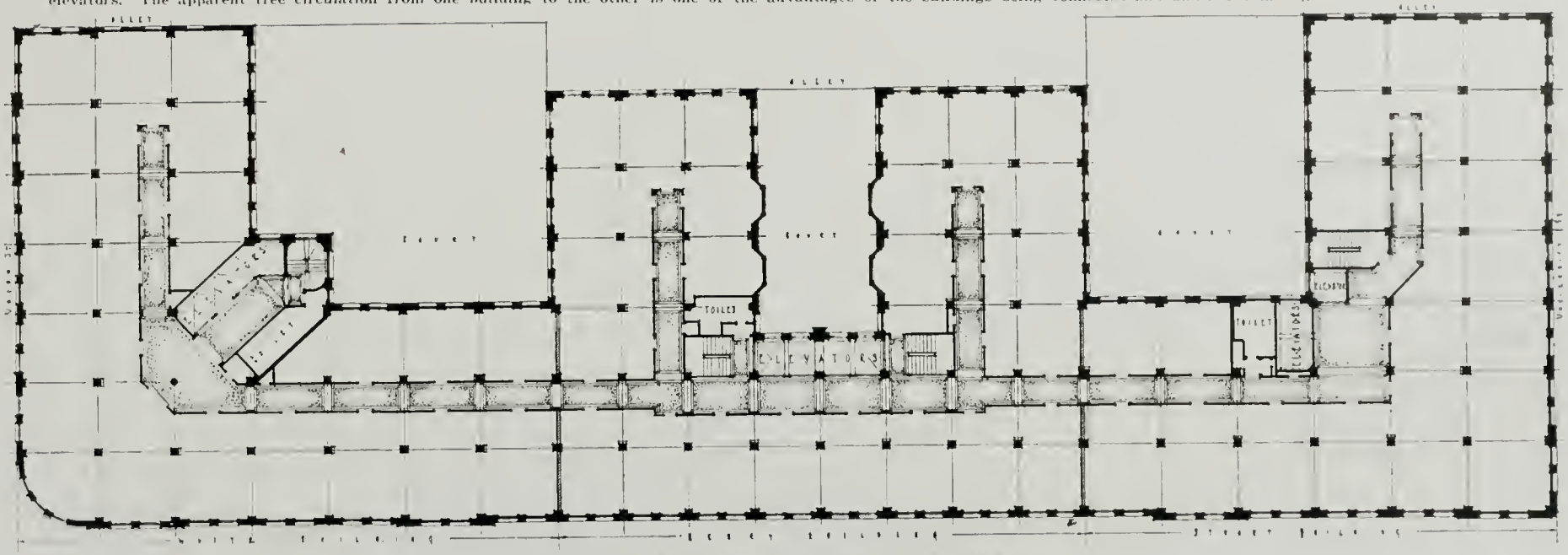
UPPER STORY DETAIL, METROPOLITAN THEATER, SEATTLE
Howells and Stokes, Architects. A. H. Albertson, Associate

The brick work is graded in color from light at the balcony level to darker at the cornice line, being one of the first attempts in this country to execute in building material the conventional form of water-color rendering. The diaper pattern used was suggested by the marble block pattern in the front of the Palace of the Doges.



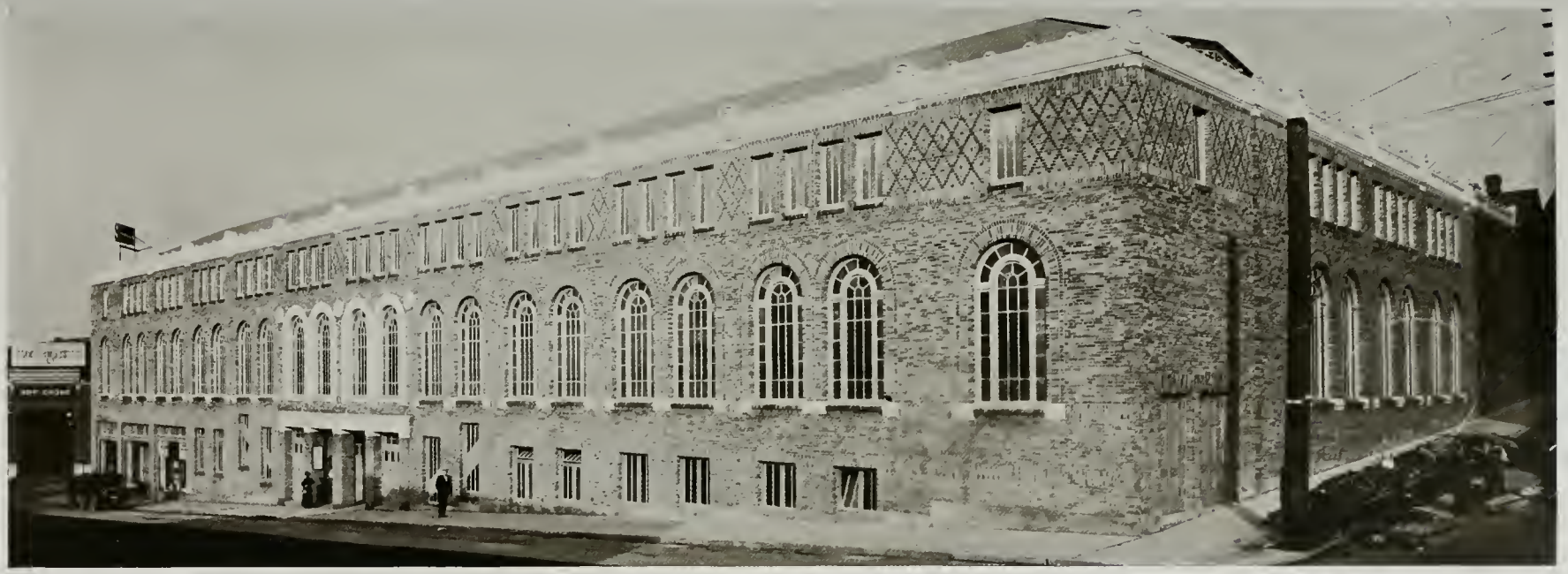
GROUND FLOOR PLAN OF WHITE-HENRY-STUART BUILDING, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

The scheme of connecting corridors through from one building to the other for the convenience of the tenants and for the purpose of increasing the rentability of rear spaces, is indicated. The side corridors running at right angles around the White Building from one street front to the other is in the nature of an arcade. The other long straight corridor is primarily for access to space adjoining and for fout traffic from one building to the other. The freight elevator and the ground floor toilet were omitted in the Stuart Building. The freight elevator of the Henry Building is used for the Stuart Building. This building being smaller than the other two buildings it was necessary to make as much space available as possible and the toilets were not installed. Being smaller and one story lower on account of the grades, the Stuart Building has but three elevators. The apparent free circulation from one building to the other is one of the advantages of the buildings being connected and under one management.



WHITE-HENRY-STUART TYPICAL FLOOR PLAN, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

This plan shows the manner in which the three buildings were designed to act as units at first, and to act as a completed building when unified by the construction of the last building. Due to the connection of each building at each floor, the end buildings have but one stairway as provided by law. This union of the three buildings has saved the construction of two sets of stairways, a saving in capital investment and rentable space, capitalized of from $20,000 to $30,000. Each battery of elevators, each toilet and each stairway receives outside light. Courts are all large in accordance with modern demand for light space and in order to compete with the older buildings having small courts and accordingly semi-lighted offices. The method of treating the corridor ends as compared to the usual method is noteworthy economy of space as well as capital investment. By stopping the corridor short of the column line the extra cost of the marble and terrazza is saved, and if it is desired to extend the end of the hall to the column line, the existing doorway at the end of the hall is allowed to remain and the part of the hall-way which is extended to the column line becomes a part of the office space, producing more rental or being a greater convenience to the tenant; at the same time costing less than the usual construction.



THE ARENA, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

An Auditorium and Amusement Hall, size 120x240 ft., with seating capacity of about 7,000; built at a cost of approximately $100,000. During the winter the building is used for ice skating and hocky games; during the other months it will be used for auditorium and exhibition purposes. The roof trusses are exposed and painted light green. The acoustics are excellent. A refrigerating plant is installed in the basement. The fenestration is Spanish in concept. The crowning member of the outside walls takes the place of a coping, cornice and cheneau, and is accordingly a co-ordination of these three features and accordingly rather free from precedent. During the construction of the brick-work, arrangements were made with the brick-yard to ship the lighter brick first and grade down through to the darker brick for the last shipments. This made possible the grading of color in the brick from light at the bottom to dark at the top.

MEN'S COLLEGE CLUB, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

This is a temporary building especially designed for the uses of the College Club. The entire treatment is of brick without embellishment other than the shield over the door and the metal coping. The down-stair windows are treated with a broad brick architrave.

A GENERAL VIEW OF THE PROPERTY TWO YEARS AFTER STARTING THE DEVELOPMENT
Howells and Stokes, Architects, A. H. Albertson, Associate

In the upper left corner is shown part of the White Building, the first completed fireproof building. Adjoining it is the steel work of the Henry Building, the second building to be erected. In front of this steel work is the site of the present Cobb Building. The two tripods show test bores being put down to determine the character of the soil under the Cobb Building. None of the streets shown in this picture are as yet completed although Fourth Avenue and part of University Street are excavated. The Colonial frame building with the bell tower is the first University of Washington building. The trees shown on top of the embankment in the central part of the picture are on an unexcavated part of the Tract. This embankment gives an idea of the amount of earth that covered the entire Tract before operations were commenced eight years ago. Various old residences at the right of the photograph were originally on top of this large embankment and on a level with the residences shown near the trees.

A CITY WITHIN A CITY

Continued from Page 18

half a year consulting with local physicians and dentists in order to determine their particular needs; and the architects retained an experienced business manager of a medical building in Chicago to advise with them during the development of the plans. The building is not an ordinary office building rented to doctors and dentists, but was planned from the beginning to fit the specific needs of doctors and dentists in Seattle. At the conclusion of two years investigation before the building was erected it was found that typical suites built during the construction of the building and before being rented, would not satisfy the local requirements. Accordingly the policy was adopted of designing suites to satisfy the particular and specialized needs of each doctor and dentist after the space was rented to him. This meant that while it cost more to construct the suites it enabled the doctors to do with less space and gave them offices specially adapted to their particular requirements. Ventilators are provided for each office throughout the building in connection with each window.

The building including the basement is exceptionally well lighted, the windows being larger than usual and their tops placed directly against the ceiling. In addition to the physicians' and dentists' offices on the upper floors, the lower stories contain many related facilities and conveniences for the medical profession, such as hydotherapeutic baths, State Medical Library, gymnasium for patients under doctors' direction, a prescription pharmacy, a medical

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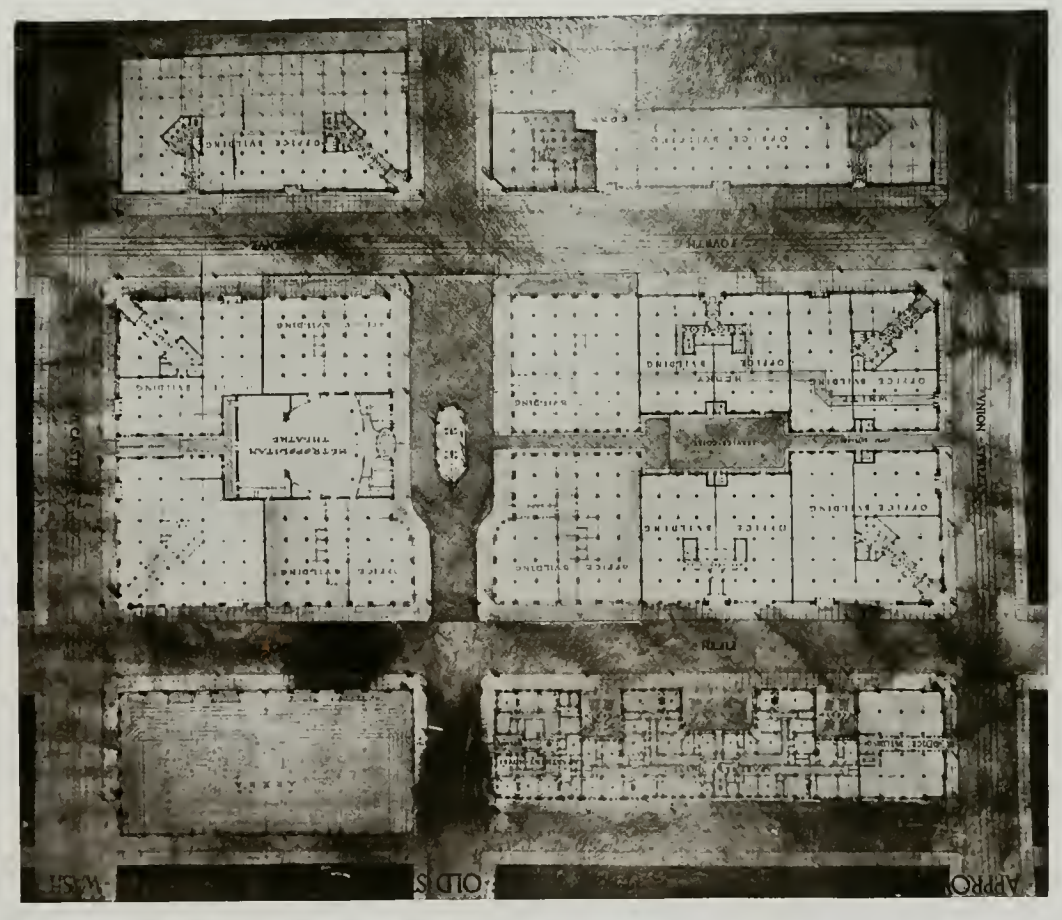

GENERAL PLAN OF THE 10-ACRES
Howells and Stokes, Architects

This shows the plan of the permanent buildings already constructed and a suggested plan for the remainder of the permanent buildings. Those already constructed are indicated by names, while the buildings proposed have no names. About 1/3 of the Tract is already covered with permanent buildings; about 1/3 covered with temporary buildings, and the remainder is uncovered. The plan shows the location of the centralized Plaza and the Theater having its main axis through the center of it. This ground floor plan should be observed in connection with the typical floor plan of the block of buildings known as the White-Henry-Stuart Building.

Creosoted Wood Block Paving.

IN the advance of modern city building ideas architects are giving increasing attention to certain other considerations aside from utility and beauty—for instance, noise. The noiseless city is the dream of the future, and greatly will it be welcomed by a generation whose ears are deafened by the needless clangor of city traffic and whose nerves are shattered by ceaseless din. In fact nerve specialists attribute a surprisingly large proportion of nervous disorders to city noise, and alienists ascribe much insanity to the same disturbing cause.

Yet so much of this noise may be eliminated without increasing either cost or effort, that it is surprising the Noiseless City has not made greater progress than may be noted in America to date. Europe has made more rapid strides than this country in deadening the sound of traffic and making her cities more desirable places in which to live.

Perhaps the greatest noise-producing factor in cities is the pavement. Asphalt is not so bad, because of its slightly yielding surface, but so many of the heavy traffic thoroughfares are covered with cobblestones, brick or some other unyielding and clangorous substance that noise continues a most distressing accompaniment of metropolitan life despite the wide use of rubber tired vehicles.

But now comes the velvet-like creosoted wood block pavement, to soften and subdue the impact of the horses' hoofs and the contact of metal tires, with attendant rattle and wear of vehicular parts. It is not surprising that in the last few years so many American cities have introduced the new pavement, and architects are urging its most careful consideration for use around public buildings, schools, churches, hospitals, etc., as well as on down-town thoroughfares under the most exacting traffic requirements.

In its early use as a paving material wood block dates back three centuries or more to Russia, but the creosoted wood block pavement of today is a far different article from the original, and is even vastly different from the wood block that was extensively used in eastern and middle Western cities twenty-five or thirty years ago. Creosoted wood block paving today is scientifically treated and is laid with advanced engineering skill, fulfilling to a remarkable degree the requirements for long life under the heaviest usage, favorableness to the changed traffic of the day, and that most desirable feature—silence.

In fact Creosoted Wood Block is finding an extended use indoors as well as for general paving purposes, its advantages making it desirable for pier floors where there is heavy traffic; in great manufacturing plants, like that of the Ford Motor Company, in Detroit; in foundries and machine shops, and in factories where the product is fragile and breakage may be reduced by a more yielding floor surface. Even where red-hot or molten metal is flying about wood blocks are proving highly acceptable, for instead of adding to the fire hazard the creosoted wood is so slow-burning as to be almost fire proof.

Creosoted Wood Block Pavement on Fourth Avenue, Seattle, after almost 7 years of service. This is the highest developed office district in Seattle and this quiet pavement is much appreciated.

The same qualities of softness and silence that recommended creosoted wood as an out-door pavement apply when it is used indoors, for its influence is decidedly humane upon factory workers. Through minimizing foot fatigue and lessening ear and nerve tension a modern floor of this kind in factories tends to promote volume of output upon the part of the workers and they return home at the end of the day less wearied in body and spirit then under the old conditions. In other words, it is an important factor in the development of efficiency.

The student of city planning and building considers the paving question from many sides. Yet like other certain civic and municipal problems, paving is relatively a new art—modern scientific paving. New conditions and new requirements make the pavements of a few years ago utterly unsuited to the traffic of today, and new ideas—such as the demand for silence—whet the desire of the paving engineer to provide the perfect pavement.

If the experience of the great cities of the world in the last twenty or thirty years may be taken as a guide Creosoted Wood Block paving approaches gratifyingly near the ideal of perfection; in fact it has often been called the paving of modern civilization. London

Broadway, New York, Paved with Creosoted Wood Block. This quiet form of pavement has increased office values on America's Best Known Street.

is credited with 300 miles of creosoted wood block paving, including such thoroughfares as crowded Regent street, while most of the fashionable west end of London, with its wealth and aristocracy, is paved with wood block. Paris has even more of it than London, with the Champs Elysses, considered the finest street in the world, one of the many famous arteries so paved.

The silence and long life of wood block have so appealed to New York that now the greater part of the heavy-traffic thoroughfares of lower Manhattan are laid with wood block. Boston as well as New York, has found that creosoted wood block laid along side granite will outwear the stone two and three times over. The city authorities of New York now consider only three types of paving, depending upon local conditions—wood block, asphalt and granite.

The Market street property owners, of Philadelphia, made a study of all sorts of paving materials with a view to selecting the most desirable, durable and generally satisfactory pavement possible. They finally chose wood block, and in letting a paving award covering 85,000 square yards are believed to approach the record in big paving contracts.

Chicago, after many costly experiments, has decided upon wood block as the paving surfacing for the heavy-traffic "Loop" district, and soon Chicago residents will have less complaint of noise. When twelve railroad companies were given a 200 year franchise for the erection and maintenance of Kansas City's new Union passenger station they laid 80,000 square yards of wood block on its surrounding streets and approaches.

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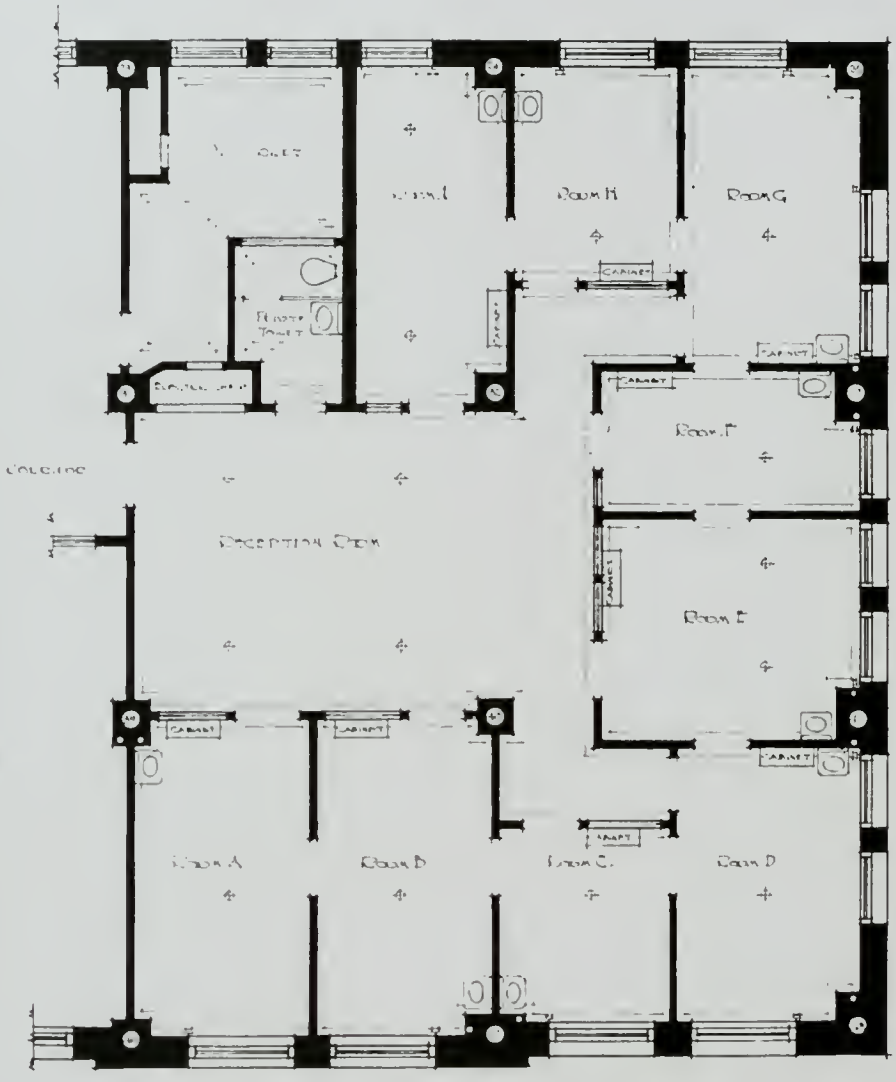
Creosoted Wood Block Pavement Laid Around Kansas City's New Union Station.

A CITY WITHIN A CITY
(Continued from Page 51)

physicians' clinical laboratory, public operating room, X-ray rooms, dental laboratory, nurses' registry, emergency supply house, and other related activities. The hydrotherapeutic baths comprise a suite containing over twenty rooms, about half of which are for men and half for women. There are several massage and rest rooms for both sexes, and physical culture rooms for each. Each sex is provided with ordinary baths, salt water baths, Neuheim baths, medicated shower and needle baths, electric light and electric water baths, sitz baths, hot air baths and douche. One room is supplied with a specially made tub for various kinds of baths in addition to the needle and shower-baths, douche, sitz bath, shampoo table, tilting basin, and a control table from which all fixtures including the douche nozzles, are operated. There is also provided a cold-bath room with the usual shampoo table, back sink, and ice box. The building is provided with two general toilets on each floor, one for each sex. The plumbing is also arranged so that in certain parts of the building bath tubs and toilet fixtures may be added at any time, while lavatories may be provided in any part of the building.



OFFICE HOUR SUITE FOR DOCTORS, COBB BUILDING, SEATTLE

Howells and Stokes, Architects, A. H. Albertson, Associate

This suite is for the accommodation of a large number of physicians who still maintain their headquarters in their own homes but desire to have a place downtown where they may make appointments and be consulted. The suite shown was accordingly laid out and built for the purpose of renting a small room to a physician for one hour only or as many hours as he might desire to arrange for. This arrangement means that any particular room might be occupied during the successive hours of the day by about a half dozen physicians each taking the space for one hour each. A common reception room is provided and furnished and an attendant maintained by the building. A private toilet is connected with the reception room for the use of all office hour rooms. This arrangement worked satisfactorily but it was found that the demand for private suites was so much greater than that for office hour room that the plan has been abandoned and re-divided into private suites.

The wall surfaces except where tile is used, are of hard plaster painted with waterproof paint giving a smooth, washable surface. In some cases the floors are of tile or terrazzo, but in general they are hard maple kept burnished with a hard, sanitary finish. The woodwork is of quartered oak, and is made as simple as possible and finished with smooth, hard surfaces of varnish.

The exterior of the building is of course in most of the main features the same as the other buildings, the principal exception being the additional clear story on the roof, and the manner in which this clear story has been related to the building and to the pent-house. The stepping back adds a powerful sense of strength and compactness to the design and like a curved corner tends to take away the thinness and frailty that so often obtains in buildings not carefully designed. The pediments at the top of the piers in the Cobb Building are segmental and the detail of the tympanum is different from that of the other buildings. The Indian heads which act as consoles at the cornice line are from a different model than those in the White Building.

An interesting method of retaining the reveal in the ground story without losing the value of the show windows has been developed. The transoms over the store windows are placed well back from the building line giving the same reveal to the pier and the window head as shown in the windows of the upper stories. The large glass show window itself is brought forward to the face of the building and a little roof or hood absorbs the differences in the plain of the show windows and the transoms over them.

Metropolitan Theatre: The Metropolitan Theatre seats about sixteen hundred and in certain respects is considered to be worthy of note. The stage is large for the size of the house and with its removable floor is probably the only house in this section that could accommodate a play like Ben Hur. A special pent-house was designed on the roof to accommodate the spot light, having an opening down through the ceiling and over the heads of the people in the gallery. The footlights hang down into the gutter from a hinged metal cover built in sections. These sectional lights can all be turned up so that lamps may be removed

and the trough may be swept without difficulty. The interior of the theatre is treated in a simple, quiet manner, the color scheme being in French greys and old rose varying imperceptibly from one surface to another. Two principles were in mind in evolving the front design of the theatre: to produce a quieter and still appropriate theatre treatment than is usual today, and to concentrate the embellishment as the central feature of the entire facade, the parts of the front outside of the center being treated very simply.

In planning the theatre it was decided to let the question of acoustics dominate all the other conditions entering into the problem. Accordingly instead of planning the building first for seating capacity, appearance, exits and so on, the size of the lot was taken and the question of acoustics from the stage was worked backward to the building necessary to enclose good speaking qualities. This procedure resulted not only in an egg-shaped plan but in an egg-shaped building with the small point of the egg at the stage. The floors are warped up at the sides, as well as the ceiling and side-walls being centered toward the stage. This method of first determining the proper curves for the limiting surfaces and then building the outer walls, ceiling and floors to suit, is already accepted as the accurate procedure, among experienced planners of theatres.

A freight elevator is provided at the center of the tier of dressing-rooms for the lifting of trunks.

As the position of the theatre in the middle of the block indicates, it is intended to be adjoined on either side by a commercial building extending several stories higher than the theatre. To this end some of the terra cotta band courses of the theatre will run across the adjoining buildings when erected.

BOX IN THE METROPOLITAN THEATER, SEATTLE
Howells and Stokes, Architects, A. H. Albertson, Associate

The boxes in the theater are characteristic of the interior for the simplicity of its treatment as to modeling and coloring. Colors used are variations of a warm grey and a subdued old rose with here and there a cream tan. The plaster modeling was done under the direction of Brioschi of the firm of Brioschi & Minuito. The canopy over one of the boxes is quite characteristic. A careful scrutiny of the various elements of detail will reveal the skill of the modeler.

The Arena: The Arena is the last building constructed upon the Tract. It is 120 x 240 feet with a seating capacity for about 6,000 people and a cost of approximately $100,000. It was constructed as an auditorium and amusement hall, being especially planned as a hockey rink during the winter months. The ice floor is 80 x 200 feet. The steel trusses are left exposed and painted light green, and the ceiling itself is of a warm grey-cream tone. The side-walls are in light tan. The ice plant is placed in the basement and the large engine though having a fly-wheel 16 feet in diameter produces no vibration in the building, due to the isolation of the footings from the footings of the building. There are about seven miles of refrigerating pipes installed in the building for forming the ice. In the summer months the building is planned so that it is to be used for auditorium and exhibition purposes. In case of its use as an auditorium the area used for skating purposes in the winter will be occupied by seats; when used for exhibitions this central body of seats will be removed.

Exits are of ample size to allow the largest truck to run directly into the building.

A study of the acoustics during the planning of the building revealed that without any important changes, the size of the lot, the shape of the roof, and the height of the ceiling as determined by the balcony and gallery heights, were satisfactory in their normal forms. Now that the building is completed a test of the acoustics reveals that the speaking qualities of The Arena are most satisfactory. A voice speaking in a quiet conversational tone from one end of the Arena can be very distinctly heard at the other end over 200 feet away; and yet the reinforcing qualities of the inner surfaces of the building that make this possible are in effect the proper relations to prevent echo.

The exterior of the building is of a hydraulic brick made in Spokane, enhanced by a small amount of cream terra cotta. The exterior design is intended to take its interest from the repetition in pairs of simple motives. The marching effect of the long rows of circular-headed openings and of the rectangular frieze openings placed in fours more than anything else gives the building its character. The design includes a marquis over the main entrance and three flag poles fastened at the points indicated by the circular terra cotta rosettes. Inasmuch as the theatre and The Arena are both places of amusement the diaper pattern of the theatre was in a modified form, repeated in the frieze of the Arena in order to maintain some common idea of treatment because of the similar uses of the two buildings. The terra cotta treatment of the parapet is an unusual development in that it combines a coping, cornice and cheneau. The crowning member produced is an evolution from and a co-ordination of these three ideas. With what success this crowning wall member has been designed and executed is open to judgment.

Up to the present time about one-third of the property is already covered with permanent buildings; about one-third covered with temporary buildings to be torn down as fast as the permanent buildings are ready to be erected; and the remaining one-third is uncovered and awaiting development. At the present time there are all told, about twenty-one buildings upon the Tract, six of which are of permanent construction. At night the exteriors of the buildings are illuminated by a lighting system somewhat similar to that used in connection with the Exposition buildings in San Francisco.

'SGRAFFITO' IN AMERICA

Continued from Page 16

craftsmen have resorted to a silicate binder in the top coat which is said to keep it soft for as long as eight days, thus affording time for the careful execution of the design.

In connection with the details of the Alexander building which accompany this, it may be of interest to note what Ralph M. Calder, who has co-operated in the work of Carrere and Hastings, and is perhaps one of the best authorities on the subject in this country, says about the preparation of the work: "The wall or receiving surface should be thoroughly cleaned, the joints raked out to receive a good key, and the surface swept with a stiff broom. Just before applying the coarse plaster coat the surface should be saturated with water. The first coat of plaster should be sufficiently thick to promote an even suction over the entire surface and to prevent dampness coming from the inside of the wall. Five-eighths to three-quarters of an inch in thickness will generally be found sufficient. The composition of the plaster used in Sgraffito must be determined by the experience of the artisan." "In much modern work the coarse plaster coat consists of from two to three parts of sharp, clean sand to one of Portland cement and a 'little' lime to retard setting. After the coat is applied and floated to an even surface it should be well scored to give a key and the surface kept wet until the color is applied."

"In this country thoroughly satisfactory results have been attained in the color coat by using earth colors with a mixture of Portland cement, lime, and sand." "If the color coat is to be black, charcoal made of burned straw or paper may be used with satisfactory results. Practically any color may be secured by the use of marble dust or specially prepared distemper colors such as golden ochre, turkey red, Indian red and lime blue. Charcoal black may be added to these colors to give depth. Brick-dust has not been found satisfactory or permanent as a pigment. "If properly prepared, the color coat, which is applied with a trowel, may be as thin as one eighth to a quarter of an inch."

The top coat is usually very light in color and may be the neutral gray of its components, or tinted in harmony with the underlying coat. As the top coat is merely a "skim", it may advantageously be applied with a large brush, but care must be taken to secure a proper consistency. As all scratching must be done in this upper coat before it sets, its composition in each case should be a matter of experiment.

The design is transferred to the surface from a full size cartoon which has been completely prepared and the lines perforated. (This may be done with a tracing wheel into a soft surface, and the reverse side sand papered to open the perforations.) When this cartoon is adjusted to the position and held in place by small nails, the perforated lines are transferred to the plaster by "pouncing" through a muslin bag filled with powdered charcoal. When the lines are clearly indicated on the wall, the cartoon is removed and the actual work of scratching the design begins. The craftsman uses simple tools. Some use only a nail and a scraper, some prefer a knife blade for cutting a sharp, clear outline. Under cutting must be scrupulously avoided as affording danger from frost and moisture. When the cut is more than a line, the color coat is scraped to remove the gray particles of the top coat.

While this process of decoration gives a wide scope to the architect and to the artist, its possibilities have never been very fully developed in this country. On the Pacific Coast, where the more equable climate would seem to invite this type of work, less has been attempted than on the eastern coast. Architecture is vastly dependent, speaking broadly, upon the allied arts for its fullest development, and Sgraffito may yet be reclaimed from its almost unknown status by the progress of the color development which has just been started at San Francisco.

CREOSOTED WOOD BLOCK PAVING

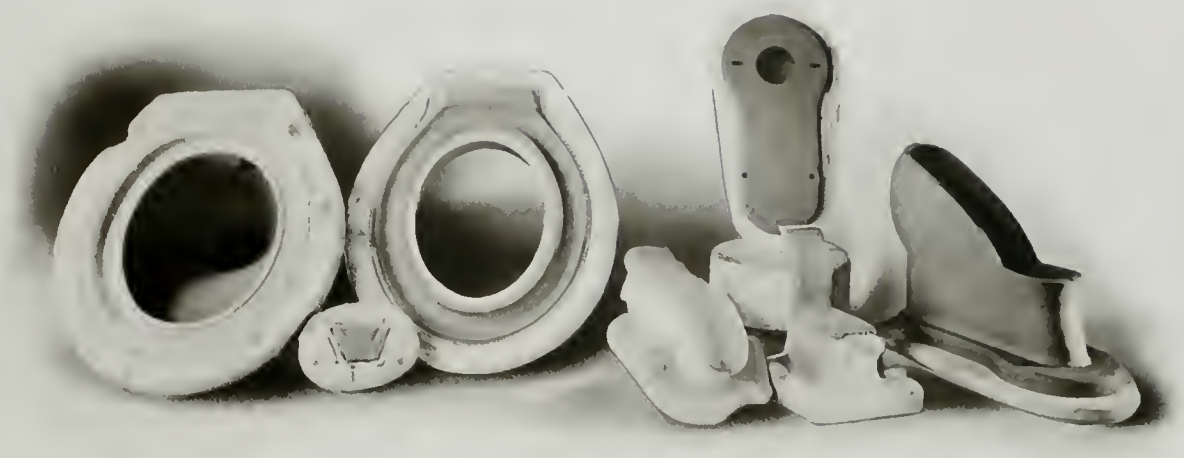
Continued from Page 52

But Minneapolis is the star among American cities to date in the laying of wood block, and Minneapolis boasts pavements famous throughout America. Upwards of seventy miles of creosoted wood block are already in use in Minneapolis, with St. Paul an active imitator, and farther west Seattle, in the center of one of the richest timber belts in the world, is enrolling as a wood block city. Fourth Avenue, in Seattle's "Metropolitan" district, a picture of which appears, was laid with wood block eight years ago, and although fully twelve million vehicles of all kinds have passed over it the pavement shows a wear of less than one-eighth of an inch, and not a cent has been required for repairs due to wear.

The fact that the rental desirability of office buildings is enhanced by wood block paving is emphasized by the experience of Seattle's "Metropolitan" buildings, which average so near rental capacity as to occasion comment among building managers all over the United States.

The primary cost of paving is only one consideration. The architect and engineer want to know the lasting qualities; it's the "per year" cost of paving that counts. While modern creosoted wood block paving, carrying from 12 to 16 pounds of creosote oil per cubic foot, is comparatively new, its life is found to exceed that of virtually every other known pavement in any degree meeting modern requirements, and its original cost is decidedly moderate.

Not only has it desirable features for business streets, but its silence, durability and sanitary features make it an excellent covering for residence streets, and it is especially recommended for deadening the noise around hospitals, churches, schools, court rooms and other buildings where noise is particularly disturbing. Kansas City has just adopted wood block for its playgrounds, because children found the wood surface so much softer and more desirable than a hard pavement.



Parts and some of the Plaster Molds used in the manufacture of a "Pacific" Washdown Closet Bowl. Some idea of the care necessary in the potter's art may be gained from the fact that twenty-two separate parts are required in the manufacture of a "Pacific" High Grade Bowl.

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THE ARCHITECT

VOL. XI. SAN FRANCISCO, JANUARY, 1916 NUMBER 1

EDITORIAL

The forty-ninth annual convention of the American Institute of Architects was held in Washington last month. The significant feature of the gathering was the large number of delegates present—probably the largest number that has ever attended an Institute convention.

The convention will easily go down in the history of the Institute as one of the most interesting and important in the life of that body. An outstanding reason for the success of the forty-ninth convention was the perfectly arranged program, which permitted the work to proceed along practical lines and without waste of time.

President R. Clipston Sturgis made a splendid address. He spoke of the record of achievement, stating that the work of groups of architects have had great influence in moulding the public opinion of the profession. Not only the moral side but the esthetic side of the architect's work has benefited by a closer co-operation. The raising of standards of good design may well be counted as an uplift of the position of the profession. Mr. Sturgis said that it was not in a spirit of pride, but thankfulness, may one consider the definite achievements of achitecture.

President Sturgis spoke of the recent trip of the Institute officers across the continent, declaring that wherever the officers went, it was necessary to understand the point of view of architects as locally related. He said the impression largely prevailed that the legislation of the Institute was framed to meet conditions differing from local affairs. Mr. Sturgis pointed out that while sometimes it was true that local conditions caused difficulty, nowhere on the trip was it found that local conditions were peculiar to any particular locality. He said that difficulties relating to the architectural profession were about the same in all sections of this country, and that architects should realize this fact and not get the idea that conditions in relation to architecture in any one community were different than those prevalent elsewhere.

President Sturgis paid high compliment to the architects of the San Francisco Exposition. In referring to the "definite achievements of architecture" as shown by the Exposition, he said that by looking back twenty-five years, we may well feel that San Francisco has achieved a success which would have been impossible then.

Plans were outlined to start work on some plan for the restoration and improvement of The Octagon, the Institute headquarters in Washington, as lack of funds for the proper maintenance of this building has been a big problem.

The special committee on the Lincoln Highway reported on its plans to bring out the artistic features in the construction and designing of bridges, monuments, and other structures for the Great Highway. It is hoped to establish State Art Commissions in each state traversed by the Highway, the duties of this commission to include control of the designing of bridges, monuments and other highway structures.

The work of the Lincoln Highway committee has been very effective, and forcibly indicates a reason for the existence of the Institute. It shows the wide development of the work of the Institute, and the possibilities that confront the architects of this country by organized endeavor. It is certain that the influence of the Institute will be felt on the Lincoln Highway.

The committee on government architecture reported results of their efforts of the past year to influence government architecture, stating that so far as the Treasury Department was concerned, conditions are not improving, and that it would be better policy to bring influence to bear on the different communities to further the aims of the Institute. The committee disapproved of such buildings as the new Interior Building for Washington, itself, and for types of Federal buildings in Chicago. The committee recommended a campaign of criticism, intelligently carried out in the press.

The report of the Board of Directors of the Institute was one of the most important read. It made mention of the result of last year's convention when the mandatory requirement of the fixed fee was eliminated from the Competition Code. In the discussion at that time, it was brought out by some delegates that the change would result in breaking down the Institute's minimum fee, thereby undoing much that had been accomplished in this direction in recent years.

The directors report pointed out that the committee on competition had observed no such results, but that, on the contrary, no competition program, for which the approval of the committee has been sought, during the past year, has carried a fee of less than six percent. The elimination of this fee removed the only ground which was incapable of defense on ethical grounds in connection with the Institute's position with reference to competition.

The Board recommended that those chapters which have not already endorsed the revised Standard Contract Documents, should formally approve these new documents and let their approval be locally known, for each community is, to a considerable extent, a law unto itself in matters of building practice.

Eighty-one new members were elected to the Institute as against fifty-eight for the year previous, an increase of forty per cent. With forty-four applications still pending, it has been many years since so large a growth has been recorded, and when one stops to consider the unprecedented depression in all building industries in the past year, the strength and growing influence of the Institute is particularly gratifying.

Although the American Institute of Architects is the only national association representing the profession of architecture, there are still, nevertheless many architects in this country, well-qualified by personal integrity and professional skill for membership in the Institute. With the rapidly-growing influence of the Institute, it is hard to feel that reputable practitioners of the profession feel that they can afford to hold themselves aloof from the one society of national scope.

Surely, there can be no questioning of the fact that the organized work of the Institute is primarily responsible for the constantly improving conditions of architectural practice. Without doubt, the public is gradually ascertaining the fact that the objects of the association are ethical and professional, and that it is not organized to secure commissions for its members.

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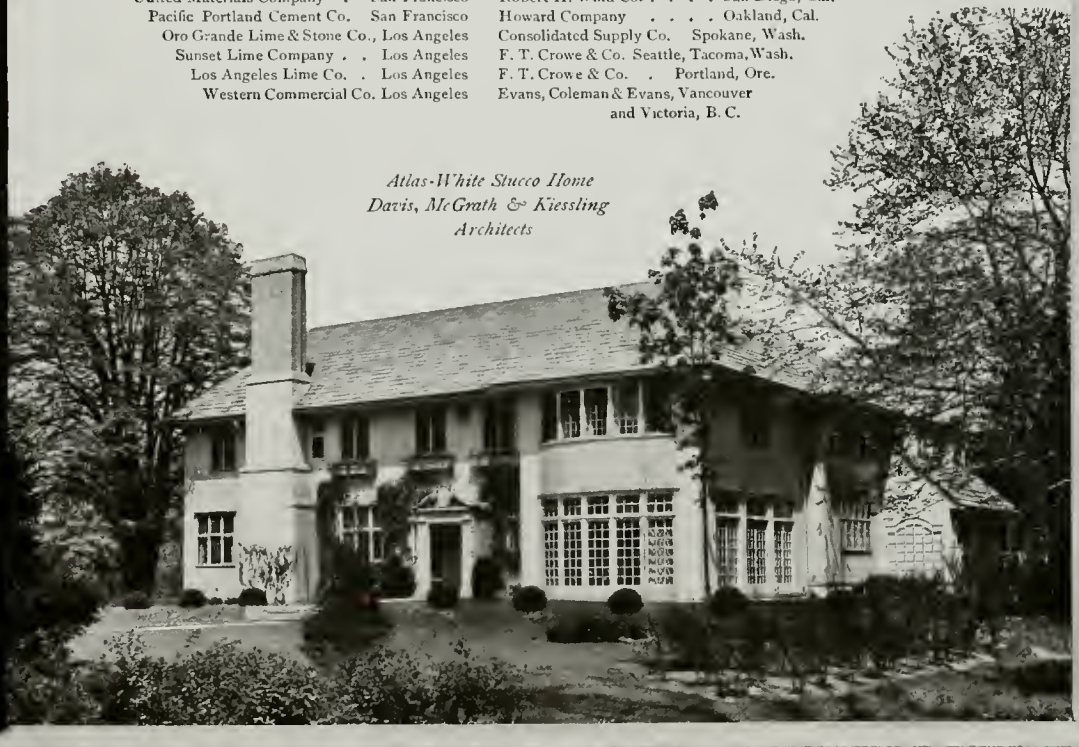

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Pacific Coast Chapters, A. I. A.

"The Architect" is the official organ of the San Francisco Chapter of the American Institute of Architects.

San Francisco Chapter, 1881—President, William B. Faville, Balboa Building, San Francisco, Cal. Secretary, Sylvain Schnaittacher, 233 Post Street, San Francisco, Cal. Chairman of Committee on Public Information, William Mooser, Nevada Bank Building. Chairman of Committee on Competition, William B. Faville, Balboa Building, San Francisco. Date of meetings, third Thursday of every month; annual, October.

San Francisco Architects Enjoy Banquet.

Through the efforts of President William B. Faville of the San Francisco Chapter, A. I. A., a get-together meeting of all architects and representatives of the allied arts in San Francisco enjoyed a banquet this month. This meeting took the place of the regular chapter session.

The suggestion that there should be no formal speeches on the festive occasion prevailed, and the president of the San Francisco Architectural Club, Mr. A. L. Lapachet, and the vice-president of the local branch of the Beaux Arts, Mr. John Bakewell, and Mr. William B. Faville, president of the San Francisco Chapter, A. I. A., voiced an expression of welcome to those present.

Mr. Faville spoke as follows:

"Now that the salt of tolerance has been sprinkled upon the tail of the dove of peace, and now that she has been caught and is quietly nestling over our architectural home, woe be it to the party that throws stones at her or plucks her tail feathers or drives her out into the 'cruel' world again.

"We are here tonight in reunion—reunion with its spirit of hope before us. The older men who hold the architectural destiny of the city in their hands, and the younger men who so shortly are to take their places—our two organizations banded together by a common interest have before them an enviable opportunity if we will but take it.

"This opportunity is not to be had by individual efforts, for it is not a one man's problem, but it is an opportunity which can be taken advantage of by force that unified efforts bring, and tonight let us take as our slogan "Get Together."

"Get-together" with the opportunities which "Get together" brings clear before us. These opportunities cannot come by single efforts; they cannot come by the separate interests of the clubs, but they must come through both clubs, realizing and recognizing that their interests and the larger interests of the city demand that we "Get together," that we "Stay together," that we "Work together," if we are to create and hold these opportunities.

"To "Get together" has been the means of solving most of the problems of the world, and our own problem and that of the city can be solved by the same sort of concerted action.

"1. It means the willingness to lay aside individual preference;

"2. Individual advertising;

"3. Individual tearing down the other fellow's work, who tries to accomplish, and it means the standing together behind some big thought or expression and shoving hard—it means co-operation;

"4. Our city built upon its many hills with the bay and ocean playing at its feet, with its natural advantages and wonderful setting needs only the magic touch of individualism, of collective personality in its plan and in its architectural embellishment to make it glorious beyond belief and to place it among the great and beautiful cities of the world. There is no reason why the dream of Fideous should not come true here, nor why the Roman splendors which were created by being borrowed by achievements from the rest of the world should not be made to reawaken in our city, and I would like to propose a toast from the San Francisco Chapter to the Architectural Club and to the Beaux Arts Society, and that it shall be a toast to 'Co-operation.'"

Albert L. Lapachet, president of the San Francisco Architectural Club, said:

"Members of the San Francisco Chapter, American Institute of Architects, fellow-members of the San Francisco Architectural Club and guests:

"Under the topic of 'Why we are here,' Mr. Faville has very ably pleaded with you for a stronger spirit of co-operation, and I hesitate to arise and address you further, for Mr. Faville's needs no enlarging upon.

"There has, in the past, been a strong feeling of unrest and lack of unity amongst the members of the profession, which has been productive of no good results. This feeling has even asserted itself in the very fold of the several organizations, but, fortunately, we have all successfully outgrown these petty jealousies, and have come to understand each other better.

"It has remained for Mr. Faville, during his term of office as President of the Chapter, to bring its members together in a more unified spirit of confraternity, and so successful has he been that he was encouraged to set about forming a closer relationship between the Chapter and the Club.

"In one of our early conversations preparatory to the arranging of the details of this affair, I was surprised to learn from Mr. Faville that there was an almost general feeling among the architects that the boys were averse to any advice or co-operation from the older members of the profession, with regard to the educational work of the club, and that the Chapter had, therefore, held itself aloof rather than be misunderstood as interfering with or trespassing upon our rights.

"Let us assure you, gentlemen, that such is not the case, and I can give no better evidence of the fact that our boys are heart and soul with you in any movement which will lead to a stronger feeling of camaraderie or to improvement of the educational work on the coast than the way in which our boys answered the call of Mr. Faville's committee and worked for the successful realization of this evening's affair.

"Gentlemen, you seem to have enjoyed the program thus far, and I am certain that, as the evening progresses, you will more than ever appreciate the efforts of the committee to entertain you. I sincerely hope that the success of this evening's affair will warrant its recurring annually, and that it will be productive of results far beyond our fondest expectations.

"Let each and every one of us this evening firmly resolve to work earnestly and enthusiastically for a stronger spirit of co-operation and goodfellowship, so that this effort of Mr. Faville's will not have been in vain.

"Mr. Faville has spoken to you at length as to "Why we are here," but modesty has forbidden him to answer the question which naturally arises in the minds of those present, as to 'How we came to be here.'

"The idea of this gathering was first suggested by Mr. Faville, with a view to bringing the Club and the Chapter together, and he has since worked hard and untiringly, against almost unsurmountable difficulties and prejudices. Notwithstanding these setbacks, Mr. Faville would not be downed, and the result has been this "Potlatch," a gathering together, in jollification, of over one hundred and thirty men, representing all branches of the profession and its allied arts.

"And now, gentlemen, in appreciation of the efforts of the pioneer of this movement, let us drink to the health of Mr. William B. Faville.

"In the past it has devolved upon the Architectural Club, with the kind assistance of a few individual members of the profession, who have unselfishly given freely of their time and money, to further the educational work on the coast. Foremost among these are the local members of the Beaux Arts Society.

"Gentlemen, the next speaker to address you is the representative of the Beau Arts Society, Mr. John Bakewell, vice-president of the Pacific Coast Committee, who needs no introduction to this gathering."

Mr. John Bakewell Jr., vice-president of the Pacific Coast Committee of the Beaux Arts Society, who was asked to make a few remarks in behalf of the Beaux Arts Society, said:

"The Beaux Arts Society has been successful for just one reason, and that is because it has encouraged the closest contact between its members and the young and ambitious draughtsmen. Its educational work is its real excuse for existence, and we are all very familiar with that work, and the help it offers to the draughtsmen. But apart from the help thus given the draughtsmen is also the advantage which its members themselves get from the draughtsmen.

"The profession of architecture is a progressive art or science, and is constantly advancing and taking up new ideas, and these new ideas must in large part come from the youth and enthusiasm of the younger men of the profession, be they draughtsmen or be they young architects. The older man, having a better basis of knowledge on which to form his judgment, can better discard the useless and foolish, and encourage only such ideas as are really worth adoption. An architect can be a creator only as long as he remains young, and he can prolong his youth indefinitely only by close association with the very young, and by constant interchange

of ideas with the young. So we should all try to bring the younger and older men together in every way possible, in the office and out of the office, in the atelier and outside the atelier. It is for this reason that such an occasion as that of this evening, which brings together the oldest and the youngest men of the profession, has a great significance, and a value much greater than that of having a good time together.

"I congratulate Mr. Faville, the President of the Chapter, on having instituted this occasion, and hope that we will be able to repeat it many times."

* * * * *

Because of the social meeting of the San Francisco Chapter, American Institute of Architects, and the San Francisco Architectural Club, there was no regular meeting of the chapter this month.

Minutes of Southern California Chapter, A. I. A.

The ninty-first meeting of the Southern California Chapter of the American Institute of Architects was held at the banquet hall of the Bristol cafe, Los Angeles, on Tuesday, December 14th, 1915.

The meeting was called to order at 7:30 p. m. by President S. Tilden Norton.

The following members were present: A. L. Aeker, D. C. Allison, J. E. Allison, J. J. Backus, F. P. Davis, P. A. Eisen, Lyman Farwell, P. H. Frohman, John C. Hillman, John C. Krempel, A. C. Martin, H. H. Martin, S. B. Marston, B. M. Morris, Octavius Morgan, O. W. Morgan, S. T. Norton, Robert H. Orr, H. M. Patterson, A. F. Rosenheim, W. J. Saunders, G. F. Skilling, J. T. Vawter, August Waekerbarth, Albert R. Walker, H. F. Withey, F. R. Schaefer.

As guests of the chapter were present Mr. A. W. Ray, a local architect; Wm. Dellamore, of the Builder and Contractor, and W. E. Prine, of the Southwest Contractor.

The minutes of the nintieth meeting of members were read and approved as corrected.

For the board of directors the secretary reported one meeting held on December 14th, at which meeting the membership applications of Mr. S. O. Clements and Mr. W. J. Dodd were presented and approved by the board and instructions given to the secretary to send out letter ballots.

For the committee on membership, Mr. Davis reported excellent progress made in securing promises from desirable prospective members.

For the committee on entertainment, a letter was read by the secretary explaining Mr. Collins' inability to secure lantern slides for the December meeting, and suggesting that the talk, if agreeable to the chapter, be postponed until the January meeting.

For the A. I. A. sub-committee on public information, Mr. H. F. Withey read a form of circular letter setting forth general information relative to the status of an architect with client. It was suggested by the committee presenting the report that such circular letter be prepared in printed form, copies to be held by the secretary of the chapter for use in the general educational and publicity work. A general discussion was entered into by various members of the chapter and several motions were offered with regard to the same. In view of the fact that the committee on public information was to be dissolved and new members appointed, it was ordered by the chairman that this communication be turned over to the new committee for general revision and for presentation at the following meeting.

The president then reported the appointment of a new committee consisting of Mr. P. H. Frohman, chairman; Henry Greene and J. C. Hillman.

For the committee on city planning, the president announced the appointment of the following members: H. F. Withey, chairman; D. C. Allison, A. C. Martin, G. F. Skilling and Robert Farquhar.

For the permanent committee on legislation, Mr. J. J. Backus reported that he had met with the committee of the board of freeholders and that assurances had been rendered by them as to the retention of the 150-ft. height limit to buildings.

Further report was made by Mr. J. E. Allison, who as chairman of the committee on competitions had acted with the committee on legislation relative to the method of handling architectural work for the city. His report was to the effect that all objectionable features of the city charter relative to architectural work would be eliminated in the new charter; that architectural services might be secured by direct appointment or by competition; that the advertising and bond features had been entirely eliminated.

Further report by Mr. A. F. Rosenheim relative to the organization of the art commission under the new charter was to the effect that such charter provided for five appointed members to the commission, omitting previous existing provisions pertaining to ex-officio members; stating that three would constitute a quorum of the art commission, and that in the future the commission would have supervision over works of art in public parks.

For the A. I. A. sub-committee on education, Mr. D. C. Allison reported on the program of the atelier work.

For the special committee on speculative building companies, Mr. Percy Eisen outlined the re-organization work being undertaken by the Builders Exchange and Master Builders Association. It was reported that the chapter's committee was keeping in touch with this movement in order to determine what the chapter's policy should be with regards to the same. He also reported as to a conference held with one of the large lumber companies and the securing of assurances from them that in the future they would assume a more conservative attitude with regard to the illegitimate building contractors.

Followed the reading of communications:

From Mr. Burt L. Fenner, secretary of the American Institute of Architects, asking for action on the institute documents. By motion made, endorsement was accorded.

From Burt L. Fenner, secretary of A. I. A., giving a brief outline of the Pacific Coast excursion.

From Mr. W. H. Adams, secretary of the joint committee of technical societies, requesting an expression from this chapter as to the continuation of joint meetings at least yearly in the future. By resolution made, duly seconded and carried, the chapter voted to take part in such a joint meeting.

From the Minnesota Chapter American Institute of Architects, calling attention to proposals of the convention relative to membership. The communication was ordered filed.

From the San Francisco Chapter of the American Institute of Architects relative to a certain competition for the Yavapai county court house, Arizona. This communication was referred to the committee on competitions.

From Miss M. L. Schmidt, manager of the Metropolitan Exhibit, asking an expression from the chapter as to the holding of an annual architectural exhibit at the Metropolitan Exhibit room. By resolution made, duly seconded and carried, the president was authorized to appoint a committee to take this matter up with Miss Schmidt.

Under the head of unfinished business, the matter of reconsidering the question of resigning from the Southwest Society came up for discussion. Following an eloquent plea from Mr. John P. Krempel, it was moved, seconded and duly carried, that this chapter move to reconsider, thereby placing the chapter again in active membership.

Under the head of new business, the question came up for discussion relative to the status of Mr. George Lowe, supervising architect for the county. This matter was referred to Mr. John P. Krempel, member of the state board of architecture, southern district, for report at the next meeting.

Discussion was next entered into relative to the location for holding annual conventions.

Mr. H. F. Withey, next presented a resolution covering the matter of the creation of a special fund made up of all initiation fees paid into the chapter; the interest or dividends derived therefrom to be devoted to educational purposes. After some discussion this resolution was referred to the board of directors.

The meeting adjourned at 10:15 p. m.

A. R. WALKER,
Secretary pro tem.
Per E. W.

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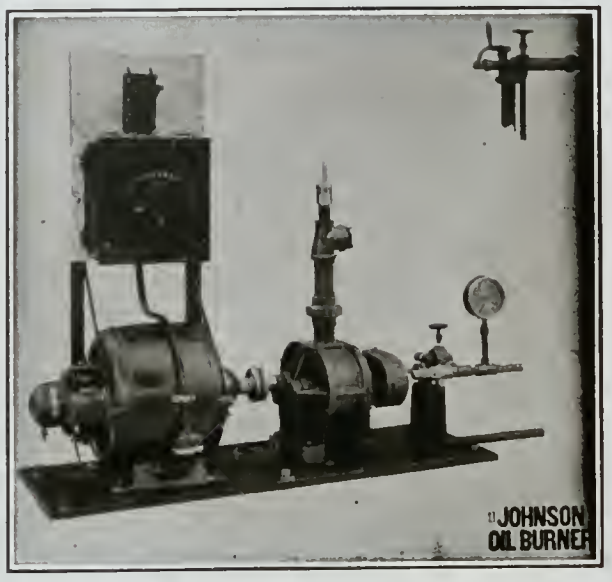

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THE ARCHITECT

VOLUME XI · NUMBER 2
FEBRUARY · 1916

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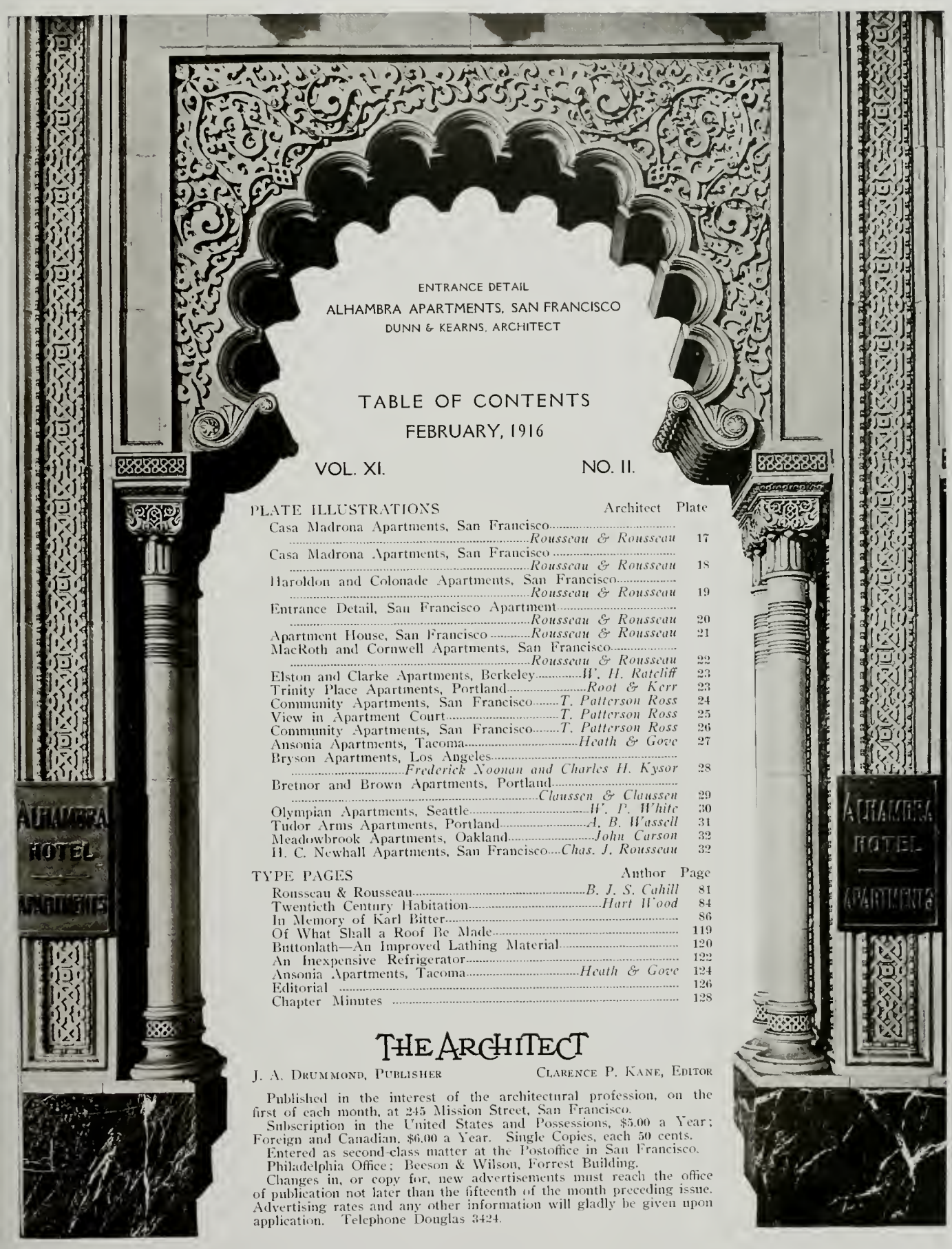

ENTRANCE DETAIL
ALHAMBRA APARTMENTS, SAN FRANCISCO
DUNN & KEARNS, ARCHITECT

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THE ARCHITECT

J. A. DRUMMOND, PUBLISHER — CLARENCE P. KANE, EDITOR

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RECEPTION HALL

ALHAMBRA APARTMENTS, SAN FRANCISCO

DUNN & KEARNS, ARCHITECT

THE ARCHITECT

VOL. XI. SAN FRANCISCO, FEBRUARY, 1916 NO. 2

Rousseau and Rousseau.

By B. J. S. CAHILL, A. I. A.

WE have all heard of the witty Frenchman's solution of the problem that one time puzzled scholars as to the real authorship of the Homeric poems. He solemnly announced that the Iliad and Odyssey were not originated by Homer at all, but by another man of the same name!

At one of the recent architectural exhibitions we were reminded of this comic piece of casuistry in noting some remarkably well conceived and remarkably well rendered designs from the office of Rousseau & Rousseau. Now the name of Rousseau has long been a familiar one in building circles, and when the name is mentioned we instantly form a fairly definite composite picture of what we have been accustomed to associate with the name Rousseau for many years. Every architect of average activity who has practiced long enough to give fair expression to what is in him creates this outward expression of himself in his work.

Now the impression we got from the exhibition in question was much at variance and in striking contrast to the existing composite mental picture conjured up by the name Rousseau — so much so that we found ourselves rubbing our eyes, as the critics say, and looking closer to see if, after all, we had read aright. Genuine surprise was followed by a sensation of interest, coupled with admiration. To be more specific, we recall stunning perspectives of two skyscraper hotels. One was a 23-story building project for the northwest corner of Pine and Stockton Streets. The building was square in plan and was conceived in so orderly a manner, that after the fashion of Greek temples, one is able to describe it in writing so closely that a practised designer could easily reconstruct the design aspect of the building from the description. Each facade is punctured with five window openings evenly spaced, and each with a mullion and transom. This system of penetration continues clear to the first attic story over the main cornice. Above this four floors recede equally from the outer boundaries of the lot in a stepped pyramid of four stages, where the windows come close to one another, in units instead of in pairs. Over the top story, with ever-receding fronts, is an open square belvedere of twelve Ionic columns topped by a similar smaller belvedere whose roof is a pyramid. From the apex rises a flagpole. The silhouette is as splendid as it is sensible, because a square plan predicates square panels in the floor frame, and there is much structural logic in carrying up each receding floor on the next inner line of columns. Though this need not actually take place, one gets the mechanico-esthetical sense of it, which is far more important.

ENTRANCE TO COURT
CASA MADRONA APARTMENTS, SAN FRANCISCO
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The first floor is arcaded with courts and mirrors, boldly rusticated. The three central arches form the entrance on Stockton Street and have a marquise. This story ends with a band course of moderate projection on which rises an order of double Corinthian pilasters through two more floors with full entablitare. After another story follows with square paneled piers and belt course above this, the main shaft runs up through ten plain floors. It is naturally understood that the whole structure bears the usual analogy to a classic column with bare shaft and capital. We have described the base, which occupies four floors, and the shaft, which takes up ten floors. We now come to a story with well defined belt courses, top and bottom giving the sense of a necking. Above this the piers develop into another order of single pilasters carrying a third story as a sort of frieze, and then comes the main massive cornice with the attic before mentioned and the crowning pyramid of floors first described.

The entire design is in every way admirable. It is without prohibitive elaboration and yet in the mass and proportion of its parts it has an elegance of its own achieved without undue expense. Moreover, this design is entirely free from a certain fussiness that mars too many of our tall buildings.

The other design spoken of was also a square tower, apparently "finished" on all sides. This structure shows four bays on each side and mounts up with bare shaft and capital through 16 stories, the whole being crowned by a mighty cornice.

Seeing that this building comes in the middle of a block, one grows skeptical about the four-sided finish. In fact, this particular project, unlike the first one, has already been realized. It is none other than the Chancellor Hotel, on Powell Street near Post, "the tallest Class A hotel on the Pacific Coast." Architecturally it is, alas! only a facade, and the big cornice of course loses most of its impressiveness by being reduced to a mere shelf. There is always something ridiculous to the writer's mind in the assumption that the front of a tall building is the only visible part of it, when in reality it is the least visible part. In this particular case one feels that a few tactful conferences with neighboring owners would result in concessions to the public's interest in architecture that would in no way be injurious to private rights of property. It would not be impossible to restrict the height of buildings by municipal ordinance to, let us say, ten stories, with the proviso that any additional height must be built up with finished walls on all fronts. The theory on which such an enactment is based would be a very simple one. It would imply that every owner is entitled to consider his inside boundaries as private up to an average height. Above this plane or stratum any building or part of a building emerges into a region which is as much the public domain as a street front. Such an enactment would check very tall, cheap buildings for mere revenue (which is really unfair to the average capitalist) and promote a monumental skyline, which, in turn, is only fair to the average citizen. No part of any city, even the largest plaza, is so conspicuous as an elevation of a couple of hundred feet above the street. Under no circumstances should any bald brick wall or concrete curtain wall be allowed to rise into this high and conspicuous region. I make bold to prophesy that we shall all come to this point of view before long.

Another drawing shown at this exhibition was also for an hotel. It was not in any sense monumental, and quite obviously it represented an investment for profit and not for show. It was to cover a large corner lot and there were the inevitable stores, the need of bay windows to the limit of the law, and the regulation fire escapes. A very ordinary problem that quite frequently calls for solution. And many an architect with just such problems would despair of doing anything worth while within such narrow limits. And yet it is exactly in dealing with such uninviting problems that architectural talent reveals itself. Any problem whatsoever can be made a masterpiece, no matter how hackneyed or how often done before.

This particular design has been realized in the Gartland Hotel, on Geary and Larkin Streets. With the exception of the unpleasant use of white tile in the piers on the main floor, this block is about as satisfactory a piece of design as one could possibly evoke out of the conditions prescribed. The proportions are admirable; the upper story and cornice display real elegance. The detail maintains admirable scale and the brick work gives texture and color to the long walls and piers that otherwise might easily be monotonous. The chalky looking columns on the main floor are explained away as whims of the owner. This, however, is an excuse that does not excuse. It is an architect's business to overrule his clients' idiotic whims.

RULFS APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

As this number of "The Architect" is concerned with apartment houses only, this class of building is herein illustrated. As no plans are shown, we can only refer briefly to the designs.

They may be classed in three groups and no doubt represent three stages in the growth of the firm of Rousseau & Rousseau, now represented by the young men whose admirable designs we first noted at a public exhibition.

The first group, not represented here, consists of rather small buildings, rather clumsily articulated with protuberant bays and quaint mission features, and various odds and ends of architectural bric-a-brac that indicate and express the earlier Rousseau traditions of Rousseau Sr.

The Junior Rousseau output which excited our admiration is in very marked contrast. In the main the design falls in two groups: a brick renaissance and a plastered type based on adobe conditions, further modified by reinforced concrete practice and flavored with certain surface features that we suspect are derived from modern German work.

Of this type are the

Casa Madrone Apartments. They are not without interest as novelties and perhaps may be types of a transitional mode that may some time shed its crudities and assume the dignity of an acknowledged style.

In the same general class are the MacRolph Apartments, suggestive of Zuni pueblos and the cliff homes of the Hopi Indians.

The brick fronts, with renaissance mouldings and members done in wood or metal, and sometimes terra cotta, are all well designed, the brick, of course, as most modern brickwork is, being used as decorative tiles to form agreeable patterns in varied tones, occasionally relieved with a bit of marble faience or terra cotta, without any regard to bond, that structural device which, of course, first suggested using brick for its patterns and not for its support. That this is perfectly defensible could be proved by endless analogies in architecture. Most of the ornamental features of a given order are reminiscent of functions long since obsolete.

On the whole, the buildings illustrated are along sound lines, and it must be remembered that what is shown is but a fraction of the output of a very busy firm. It is the fact that these young men have done such admirable work and by the extent and efficiency of their organization are in the way to do a great deal of a much more serious and monumental character in the near future, that "The Architect" has featured their work to remind its readers that the name of the firm is also symbolic of its achievement, summarized in the legend—Rousseau, and Rousseau.

- - - -

The American Academy in Rome announces its annual competitions for fellowships in classical studies.

The following Fellowships will be awarded: A Fellowship of the value of $1,000 a year for one year; a Fellowship of the value of $1,000 a year for two years. The awards are made on competitions which are open to all unmarried citizens of the United States who comply with the regulations of the Academy.

General Regulations. Sec. 1. All persons desiring to compete for a Fellowship must fill in a form of application, which will be furnished by the Secretary of the Academy upon request, and file the same with the Secretary not later than March 1st, together with such letters of reference and other documents or evidence as they may desire to submit. Application and papers must be submitted in triplicate.

Sec. 2. They must submit evidence of attainment in Latin literature, Greek literature, Greek and Roman history and archæology, also an ability to use German and French. They will be required to present published or unpublished papers so as to indicate their fitness to undertake special work in Rome.

The Fellows will be selected without examination, other than the submission of the required papers, by the Fellowship Jury, of whom the following are members: James C. Egbert, Columbia University, Chairman; George L. Hendrickson, Yale University; Gordon Laing, University of Chicago; Allan Marquand, Princeton University; Clifford H. Moore, Harvard University; Leverett Moore, Vassar College, Secretary; Chandler R. Post, Harvard University; John C. Rolfe, University of Pennsylvania; Moses S. Slaughter, University of Wisconsin.

Sec. 3. The competition in Classical Studies will consist of the submission of evidence of special fitness for advanced work, and Academy Fellowships will be awarded to the successful competitors.

Fellows in Classical Studies will be required to engage in some piece of special research during the term of their Fellowship, and to publish the results of their investigation, as the Academy may direct.

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(a) Immediately prior to departure for Rome, one hundred ($100) dollars for traveling expenses to that city.

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DUNEDIN APARTMENTS, SAN FRANCISCO
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The Twentieth Century Habitation.

By HART WOOD

OF WOOD & SIMPSON, ARCHITECTS SAN FRANCISCO

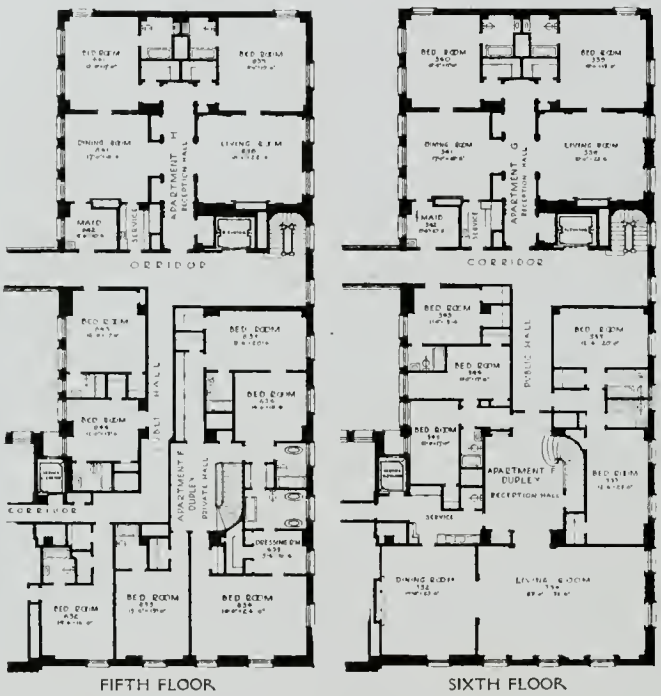
THE growth of the modern apartment house in this country had its beginning in New York City in the early eighties, and was contemporaneous with the modern development of the passenger elevator. Its introduction and development in the present form was due almost entirely to the efforts of one man, Philip G. Hubert, an architect of the firm of Pirsson & Hubert. Considering the remarkable growth and the unusual incentive, on account of keen competition and perpetual demand for novelty, to improve and economize, the work of this man is most remarkable. At a time when steel frame construction was in its infancy, he designed and built several of these buildings, many of which would not be considered insignificant in this day of large structures. One of the most notable of his work was a group of apartment buildings at Fifty-eighth and Fifty-ninth Streets on Seventh Avenue, in New York City. This consisted of eight separate buildings, twelve stories high, covering an area of 200 by 425 square feet. It is interesting to note that few of our present day apartment buildings exceed this height. He was the originator of both the co-operative and the duplex ideas and was the first to use a system of refrigeration operated from a central plant.

Vitruvius tells us that there are five classes of temples divided according to the spacing of their columns as follows: First, with the columns close together; second, with the inter columination a little wider; third, more open still; fourth, with the columns farther apart than they ought to be, and fifth, with the spaces just right. Now in the apartment house, the unit, of course, is the room, so by substitution it is obvious that the same classification will apply. Theoretically, therefore, we may say after Vitruvius, that there are five classes of apartment houses. Other classifications he also gives us for subdivision, but tabulation lies without the scope of this article. Further research on the part of the reader will undoubtedly disclose many other striking similarities. From the poorest tenement to the gold plate "suite de luxe," each will be found to fit under one of these headings.

Modern exponent of the simple life, antithesis of the Roosevelt doctrine, product of intensive life, and modern substitute for the hearthstone, the apartment house typifies our city existence. Its progenitor was novelty and its life innovation. Its dress is tinsel but its body is convenience. Elegance and luxury its companions and sentiment a distant relation. It has dispensed with the servant and banished labor, concentrated essentials and economized existence. Product of an age of progress, it is like the fabulous creatures of James Whitcomb Riley "'at swallers 'emselves." It is a success only so long as it is a novelty and it is a novelty only till the next one is built. Depreciation stalks always at its heels. It is one of the favorite instruments used by the speculator in that common operation,—"extracting the bank roll,"—in this respect ranking second only to mining stock and the gold brick. The subject is first placed under the lethal influence of a full house; hypnotic suggestion of 20 per cent returns applied, and the operation is then painlessly accomplished.

While subject to much abuse at the hands of the jerry builder, speculator and the other vandals, the apartment house is nevertheless adaptable to human habitation, susceptible to dignified treatment and profitable investment. The high degree of economy and efficiency obtainable in the associated dwelling were readily appreciated by the financial juggler, and with the avarice characteristic of his class, he has proceeded to pervert these very qualities to the detriment of legitimate enterprise, and by colonizing and devious methods of construction succeeds in unloading with almost monotonous regularity.

This class of activity has predominated heretofore to such an extent that the more serious side has been lost sight of. It is still possible to plan living rooms to live in, kitchens to cook in and dining rooms to dine in, instead of resorting to expedients; the distinction being that between living and mere existence.



DUPLEX APARTMENTS, HOTEL ST. FRANCIS, SAN FRANCISCO

BLISS & FAVILLE, ARCHITECTS

The essential elements of an apartment do not differ necessarily from those of a home. It is in effect a group of homes and it is possible with inconsequential variations to incorporate all the essentials of a well-planned dwelling. Everything necessary in a house may be transposed to an apartment, and once inside the suite there is nothing, barring the outlook, which would differentiate it from the detached dwelling, with the added advantages due to concentration. It is even possible to have the sleeping and living quarters on separate floors.

Why, then, should this particular form of habitation be degraded to a place of mere existence?

The excessive advantage taken by the speculative builder of the investment possibilities of the apartment is undoubtedly responsible for the increasing difficulty of renting and the constantly diminishing returns which they can be made to earn. In the demand for concentration the sentiment of life has been lost. The possibility of living and dining and sleeping in the same room is unquestionably economical to a superlative degree, and may be practical, but life without sentiment is not life, and if there is no sentiment in the home, there is certainly not much anywhere.

Those intimate associations which gather round the home and transform it from a mere house to a part of one's life have nothing in common with the accepted conception of apartments. The seat of the fireside, the family table, the library, the furniture and ornaments, paintings and rugs, all become mere instruments of convenience when transferred to the "two rooms and bath." Why not build more apartments to live in?

The reaction against the extremely compressed apartment has already begun, and there is now evident a desire for a change, indicated by the increasing difficulty of renting, and this desire is recognized by investors, but as yet the particular expression of the desire does not appear to have taken definite form. There is a marked dissatisfaction evident with the existing order. The tricks and artifices for "pleasing the public" appear to have become almost ex-

hausted. Is it not reasonable to assume that a place with all the comforts of home and all the conveniences of an apartment would be an attraction to lure the distracted house hunter?

Apartments designed as real homes have heretofore been provided only for the rich. There are some exceptions of very recent date which appear to have been particularly successful, notably some in the New York suburbs and in Southern California. These are located in residence districts, and the fact that they are well rented may indicate that a downtown location may not be so essential as has been supposed. The poor man may now have an automobile, why not also an apartment without making it like the handy tool of a hundred uses which is good for none.

Almost simultaneous with the introduction of associated dwellings was the conception of the co-operative apartment, or "home club." A miniature colony of aristocratic socialists foredoomed to failure, it nevertheless reappears intermittently as a brilliant inspiration. Alluring in prospect, it is disappointing in fact. Division of authority and responsibility has ever been a source of failure. What is everybody's business is nobody's business.

And the lack of centralized authority and of definite responsibility causes a laxness of administration which eventually disrupts the association.

Admitting all of the advantages in favor of apartments, there are some qualities which are lacking and which are of necessity impossible to attain.

The home atmosphere is absent, as is also the desirable ground space, and they are also unsuitable for the raising of families. It may be that this latter is not of itself sufficient reason in this age to cause undue apprehension for the future of apartments. Despite the prevailing tendency of the American family toward absolute zero, there are yet some who persist in the belief that it is the duty of man to replenish the earth. For these the apartment is not. Concentration, restriction and convenience have nothing in common with normal childhood. All outdoors is not too big and cast iron is not impervious to the tireless destructive energy of the active human young.

The advantages obtained by associated dwelling have heretofore been confined to those assembled under one roof. That is, the close grouping of these units has made it possible to obtain at comparatively small cost those conveniences which in a separate building are possible only at disproportionate expense, labor and inconvenience. Custom has thus far determined that these dwellings shall be centrally located; that is, near the center of town, which implies expensive land.

The question arises, Why not use less expensive land, separate the units and provide all of the conveniences? Given a piece of land, say a city block in the residence section. Lay out the houses as apartments are planned, i. e., separated, of course, but with due regard one for the other, that the whole, while reasonably compact, may take all advantage of light and air, and each with due consideration for his neighbor; in this much to be a similar scheme to the "garden cities" of England and the East. The planting and architecture are designed with the idea in mind of the finished whole. Each house then considers its neighbor's view, respects its lot line and the ever-present possibility of some one building a monstrosity is dispelled. It quite often happens in individual house building on uniform lots, in the scramble for each to secure to himself the maximum of view and exposure, one blankets the other, with the result that most of it is lost to all. Each unit will then be planned with due regard to its own interests, but also with the interest of the others in mind.

LIBRARY IN THE APARTMENT OF CHARLES A. PLATT, ARCHITECT, NEW YORK
(From the Monograph of the Works of Charles A. Platt)

It is obvious that under such circumstances the maximum of efficiency may be obtained from a given piece of land, and the planting being designed for the whole group immediately opens possibilities in that line which do not occur at present, where it is done not only without uniformity, but for the most part without study. In addition then provide a central heating plant, and pipe steam and hot water to the separate houses. The light, gas, water, etc., in most cases are as accessible as down town, but these could, if necessary, be also furnished from a central plant. The services of one or two handy men then are all that is necessary to complete the scheme. Thus we have the comforts of home with the conveniences of an apartment; there is no more objection to children, and he who desires the sight of green grass and flowers from his windows is accommodated. All of the upkeep and labor devolves upon the management; all of the petty annoyances incidental to the possession of the individual house are assumed by those whose business it is to look after those things and to whose interest it is to see them properly taken care of. Upkeep and repairs, odd jobs and handy work, lawn tending and garden work, if desired, all may be so handled. These, being controlled by the central management, will be economically and efficiently administered.

This is a reproduction of an original engrossed copy sent to the family of Karl Bitter

TO THE MEMORY OF KARL BITTER SCVLPTOR THIS TRIBVTE BY THE MEMBERS AND ASSOCIATES OF THE ARCHITECTVRAL COMMISSION OF THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION

Karl Bitter was a great sculptor. He is now of the immortals. While the chronicling of his achievements in art is properly the task of the historian, still it is none the less fitting that we should here recall the signal debt of gratitude owed him by San Francisco. He was appointed Chief of Sculpture by the President of the Panama-Pacific International Exposition at the instance of the Architectural Commission. In this capacity he organized the Department of Sculpture that gave to the Exposition the wealth of decoration that compels the admiration of the world. Karl Bitter became associated with the Architectural Commission early in nineteen hundred and twelve. He shared in all its important deliberations. He exerted a potent influence in its work; and the value of his services to the Commission is beyond measure. He was swift to win the admiration and affection of the architects of the Panama-Pacific International Exposition. To his rare attributes as a sculptor, he added a profound sense of duty to his task that was awake at all times. His untimely death takes a great personality from the field of art, and creates a void that will be difficult to fill. We, the undersigned hereby desire to express the respect, the honor, and the love in which we cherish his memory;

THEREFORE, BE IT RESOLVED, That we, the Architects of the Panama-Pacific International Exposition, proclaim that in the passing of Karl Bitter, the Fine Arts and the Nation have sustained a great loss. We realize the anguish caused by his untimely end, and to the members of his family we offer our heartfelt sympathy. We recognize and mourn our great personal loss through the premature death of a beloved friend who, in all of his work, exercised a distinctly high moral influence that will endure for the good of humanity.

Signed by

Willis Polk — *Geo. W. Kelham* — *McKim, Mead & White*

Ward & Blohme — *Louis C. Mullgardt* — *Carrere & Hastings*

Bliss & Faville — *Bakewell & Brown* — *Henry Bacon*

Edward H. Bennett — *Bernard R. Maybeck* — *Robert Farquhar*

ENTRANCE TO COURT
CASA MADRONA APARTMENTS
ROUSSEAU & ROUSSEAU, ARCHITECTS

Photo Gabriel Moulin

CASA MADRONA APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

CASA MADRONA APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

Photos Gabriel Moulin

COLONADE APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

Photos Gabriel Moulin

HAROLDON APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

MAIN ENTRANCE
HAROLDON APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

Photos Gabriel Moulin

MAIN ENTRANCE
DUNEDIN APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

CHATEAU DU MON APARTMENTS, SAN FRANCISCO

HILLSBOROUGH APARTMENTS, SAN FRANCISCO

ROUSSEAU & ROUSSEAU, ARCHITECTS

Photos Gabriel Moulin

ST. FRANCIS APARTMENTS, SAN FRANCISCO

MAC ROTH APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

CORNWELL APARTMENTS, SAN FRANCISCO
ROUSSEAU & ROUSSEAU, ARCHITECTS

Photos Gabriel Moulin

ELSTON & CLARKE APARTMENTS, BERKELEY
W H RATCLIFF, ARCHITECT

TRINITY PLACE APARTMENTS, PORTLAND
ROOT & KERR, ARCHITECTS

GREENWICH TERRACE COMMUNITY APARTMENTS, SAN FRANCISCO
T PATTERSON ROSS. ARCHITECT

VIEW IN EAST COURT

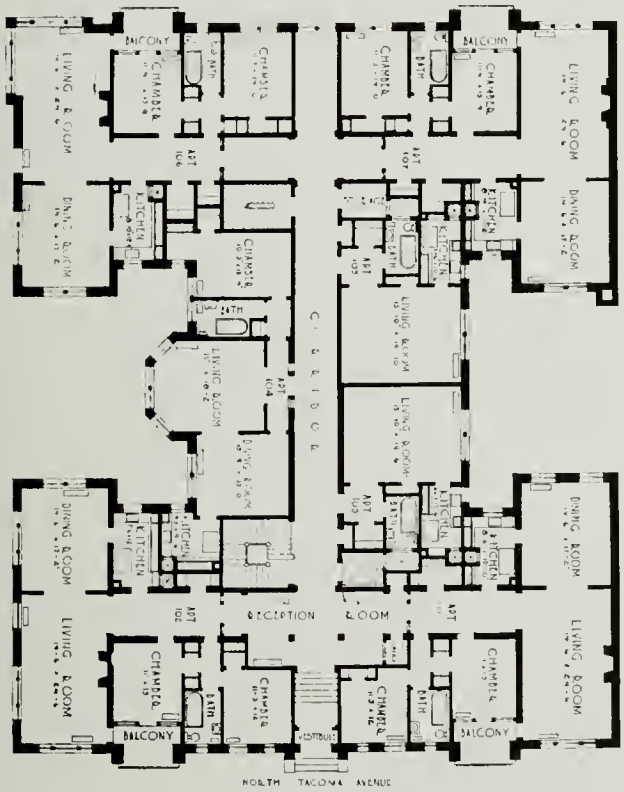
GREENWICH TERRACE COMMUNITY APARTMENTS, SAN FRANCISCO

T PATTERSON ROSS, ARCHITECT

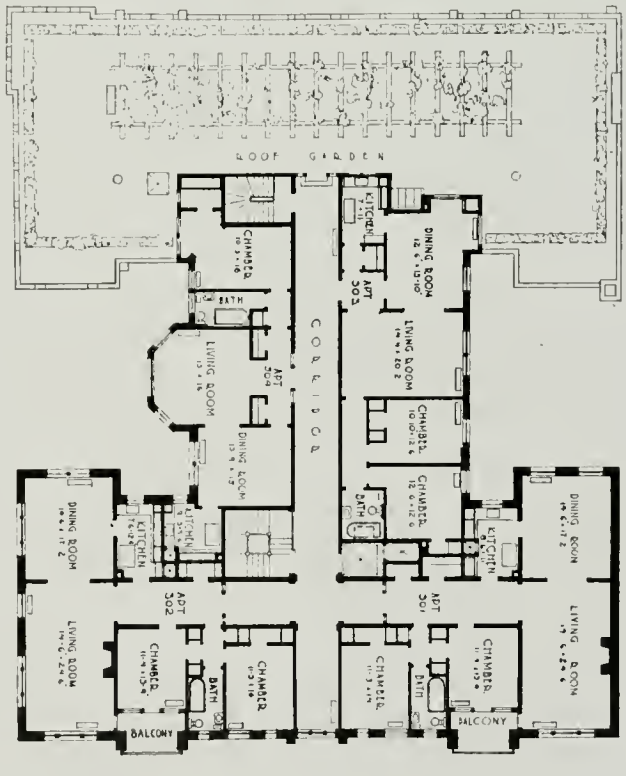
VIEW IN COURT
GREENWICH TERRACE COMMUNITY APARTMENTS, SAN FRANCISCO
T. PATTERSON ROSS, ARCHITECT

VIEW ON GREENWICH TERRACE
GREENWICH TERRACE COMMUNITY APARTMENTS, SAN FRANCISCO
T. PATTERSON ROSS, ARCHITECT

THE ANSONIA APARTMENTS, TACOMA
HEATH & GOVE, ARCHITECTS



FIRST FLOOR PLAN



THIRD FLOOR PLAN

THE ANSONIA APARTMENTS, TACOMA
HEATH & GOVE, ARCHITECTS

THE BRYSON APARTMENTS, LOS ANGELES
FREDERICK NOONAN & CHARLES H. KYSOR, ARCHITECTS

BRETNOR APARTMENTS, PORTLAND
CLAUSSEN & CLAUSSEN, ARCHITECTS

BROWN APARTMENTS, PORTLAND
CLAUSSEN & CLAUSSEN, ARCHITECTS

THE OLYMPIAN APARTMENT BUILDING, SEATTLE

W P WHITE, ARCHITECT

TUDOR ARMS APARTMENTS, PORTLAND

A. B. WASSELL, ARCHITECT

THE MEADOWBROOK APARTMENTS, OAKLAND
JOHN CARSON, ARCHITECT

H. C. NEWHALL APARTMENTS, SAN FRANCISCO
CHAS J. ROUSSEAU, ARCHITECT

Of What Shall the Roof be Made?

AS we look over the country and see the large number of industrial plants that have been roofed and in many cases sheathed with asbestos; when we note also the many fine, substantial homes whose owners and builders are adopting asbestos in all sections of the country, it is quite evident that this splendid material is receiving the very favorable attention and recommendation of our leading architects.

Of course, everybody knows the fire resistance of asbestos — in this respect it is the equal of slate or tile— but it also possesses several other advantages as a roofing material, and it is these which probably induce many people to select asbestos shingles.

In the first place, asbestos shingles are much lighter than slate and therefore call for lighter and less expensive sheathing foundation. Asbestos is also less brittle than slate and can be handled and used with smaller loss.

It is a fact also that asbestos shingles on a roof resist the ravages of wind and storm better than slate—they lay flatter and more snug and are therefore less liable to rattle, break or fall off.

Asbestos shingles compare most favorably with good quality slate, so that when we consider both of these materials from all standpoints, we can readily account for the growing demand for asbestos roofing and sheathing.

One of the finest examples of the latter material that we have ever examined is asbestos "Century" shingles, made by Keasbey & Mattison, of Ambler, Pa. These shingles, which are made under patent rights, embody all the advantages over slate enumerated above, in appearance are quite the equal of the natural quarried product, and are made in many styles and sizes to suit the different types of architecture.

Asbestos "Century" shingles and other asbestos building products made by Keasbey & Mattison have been very extensively used in the Panama Canal Zone on government work, and in some communities practically whole towns have adopted asbestos "Century" shingles for roofing and sheathing purposes.

We understand the manufacturers will be glad to send any readers of this journal samples of asbestos "Century" shingles, together with illustrated literature on these and their other asbestos products.

RESIDENCE OF MRS. MARCUS DALY --- HELENA, MONTANA

An architect once declared that he had never specified asbestos "Century" shingles for the following reasons:

First—That a roof on which they are applied is lacking in all artistic qualities.

Second—That the color tone is ineffective and that it is impossible to obtain either good contrast or harmony with the prevailing color treatments of modern residence work.

Third—That the shingles are flat and characterless, and that they lend no point of interest to the details which play a large part in modern domestic architecture.

This was his honest and candid opinion of the Asbestos "Century" Shingle, after never having used them.

There is no question that Asbestos "Century" Shingles will not harmonize with certain types of buildings, any more than a thatch roof would be appropriate on a cathedral. However, in condemning these shingles for their alleged lack of character and startling individuality, does the architect not lay too much stress on a detail of construction, forgetting that the success of his problem depends on harmony of line and mass and of course color, rather than the employment of exaggerated detail, which, while perhaps interestingly unique, is very often at variance with good taste and purity of style?

The craze for heavy effects in roofings has originated from a desire to emulate old roofing materials, which were in most cases handmade and necessarily heavy and rough. Our modern roofing manufacturers, in their endeavor to imitate the antique pottery and tilemakers, have produced much that is grotesquely bizarre.

RESIDENCE ON BITTER ROOT STOCK FARM --- MRS. MARCUS DALY, OWNER

Buttonlath—An Improved Lathing Material.

ALTO LOMA SCHOOL, CIENEGA DISTRICT, LOS ANGELES
ROBT MAC FERRAN TAYLOR ARCHITECT
This is one of the many school buildings that have recently been erected, in which Buttonlath has been used Mr. Taylor was so pleased with the result in this building, that he immediately ordered the use of Buttonlath in the $20,000 J. D Seitz residence at Covina, California

ONE of the newest industries in the building line and one that gives promise of revolutionizing the methods of applying plaster to both exterior and interior surfaces, is the manufacture of the product known as Buttonlath. "Buttonlath" is a coined name which has been protected by copyright to designate the product of the Buttonlath Manufacturing Company, who are getting ready to start plants in several of the leading cities of the country, so as to make their product a national one.

Buttonlath is an improved lathing material in which the best features of metal lath, wood lath and plaster board construction have been successfully embodied and combined and the undesirable features successfully eliminated. Buttonlath is composed of waterproof paper and a non-porous, non-combustible plastic body which makes it a fire retardent, sound deadener and heat insulator. It simplifies and improves construction, saves plaster, repair bills, and not only prevents plaster cracks, but makes a true wall free from waves. It is cheaper than metal lath and no more costly than a good job of wood lathing.

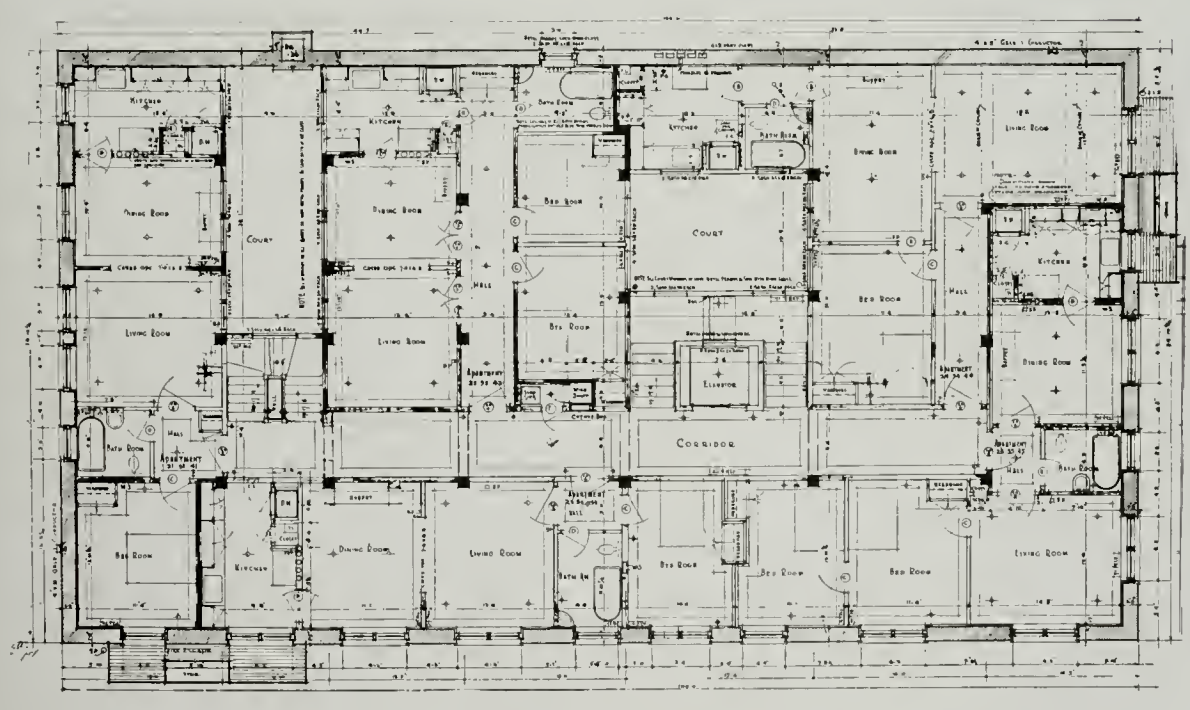
A BUTTONLATHED ROOM IN THE MAKING
The above photo shows a room Buttonlathed and the plaster coat just being started Note the method of breaking joints, using half sheets alternating at starting point. Also note the use of strips and pieces of Buttonlath as patching and stripping for irregular spaces

Buttonlath is made in the general form of plaster board in sheets 24 x 32 inches, and is applied in the manner shown by the illustration elsewhere in this article. The plaster buttons are stagger-spaced 1½ inches on centers in both directions; 530 buttons to the square yard. These buttons will hold fifty pounds before breaking, and as the plaster gets a good grip under the edges of each button, a positive mechanical key is thus formed. As a matter of fact, Buttonlath provides a triple bond for plaster—the mechanical key, suction and adhesion, thus forming a triple strength.

Buttonlath saves both on space and weight, as the solid partitions are 1½ to 2 inches thick as compared with the usual 6-inch partitions and weighs less than 15 pounds per square foot as compared with hollow tile partitions, thus eliminating an enormous dead load. In

Continued on Page 124

CARMELITA APARTMENTS, PORTLAND
LEWIS I. THOMPSON, ARCHITECT



Typical Floor Plans

An Inexpensive Refrigerator.

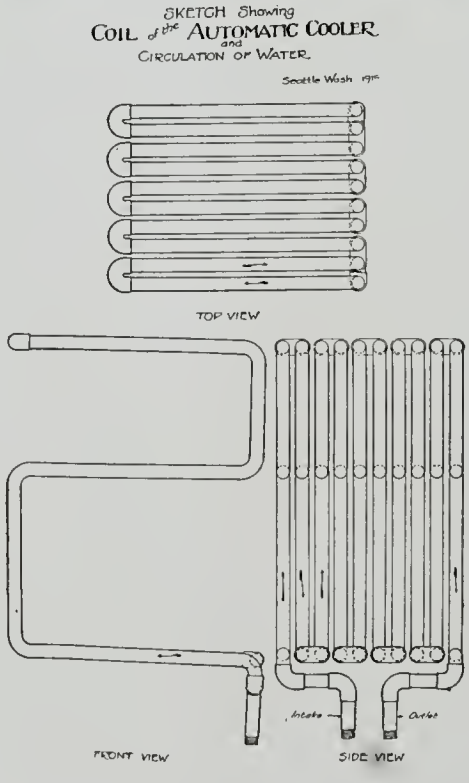
OF all the household appliances with which the housewife has to contend, the ice-box is without question the most trying. One has only to read the instructions about "How to Use an Ice-Box," which are always pasted inside the door of one, to realize the care and trouble involved in keeping them clean, fresh and sanitary. Even the best of them require constant attention, and their use entails not only a constant expenditure for ice, which is the equivalent of interest payments on a considerable investment, but all the accompanying annoyances as well,—the trouble in getting the ice, the invariable necessity of cleaning up after the ice-man, the emptying of the drip pan, and the scouring and scalding needed to keep the box in a healthful condition. An ice-box without ice is worse than no ice-box at all, because the boxes must be air-tight, and consequently, unless the air inside is kept cool, they become in reality heaters instead of coolers. So ice must be purchased. It is safe to say that the average ice-box, which is usually a cheap and poorly insulated affair, causes the housekeeper to lose her patience more often than any other device in daily domestic use.

The reason for all this annoyance is found in the fact that the ice-box is fundamentally wrong, so far as the preservation of food is concerned, in principle and in practice. They are designed to preserve the ice as long as possible, the food being a secondary consideration, and their efficiency depends on the length of time they will keep ice from melting. In order, therefore, to be more efficient, they must keep fresh air out; in other words, the most efficient ice-box is the most air-tight box, for it is the warm outside air that melts the ice. Air-tightness is achieved by thick reinforced walls, made of several thicknesses of insulating material, all designed to prevent the radiation of the cold air from within the box, or the penetration of the warm air from outside.

It is just this shutting-out of the fresh air that causes the trouble within. All ice is admittedly more or less impure, whether natural ice or artificial ice. Every doctor will warn his patients against the impurities and dangers of ice water, while artificial ice can never wholly disguise the odor and taste of ammonia, which is used to produce it. The natural result is apparent: in melting, the ice gives up its impurities to the air which is confined in the ice-box with it. This air is circulating around through the shelves and comes in direct contact with the food, where it deposits the moisture which it absorbs from the ice. Thus the food becomes damp, and therefore moulds, and will decay and spoil quickly. Meats will discolor, butter and milk will absorb odors, and all foods will deteriorate much more rapidly than if they were kept dry as well as cold.

To overcome these many disadvantages of expense, inconvenience and insanitation, and to take advantage of the cold water, which is found in practically all the communities west of the Rocky Mountains, where the water usually comes either from the mountain streams or from springs, and is consequently cold, even during the summer months, a new natural refrigerator, called the Automatic Cooler, has recently been put on the market, which at once overcomes the expense and the other objectionable features of the ice-box. This cooler is built with coils of galvanized pipe running under and around each shelf, and these pipes are connected into a continuous coil, so that every drop of water entering at the inlet must circulate through all the pipes to the outlet. The water main from the street, entering the house, apartment or store, is then cut at any convenient point, and a connection run from this cut in the main to the inlet in the cooler, and back again from the outlet in the cooler to the other end of the incoming main at the point where it was cut.

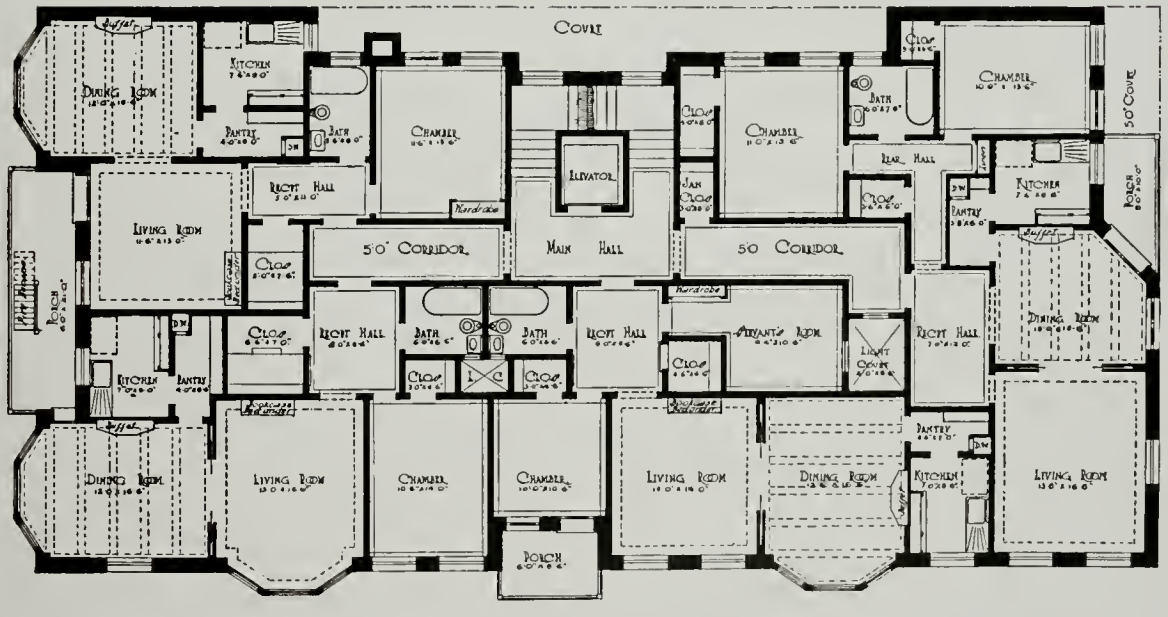
THE AUTOMATIC COOLER



This makes it certain that every drop of water used in the building is first drawn through the cooler as it travels on its way from the main to the taps, toilets or tank heaters, this cold incoming water having circulated through every inch of the long coils of pipe in the cooler. Not one extra drop of water is needed,—just that quantity used in the ordinary daily domestic consumption is quite sufficient to renew the supply in the cooler frequently enough to insure constant coldness, in such districts as have a naturally cold water supply. This not only eliminates forever the expense of ice, and the cost and trouble of upkeep of an ice-box, but renders the cooler absolutely automatic and constant, year in and year out. The first cost is the last cost.

The important and sanitary feature of the Automatic Cooler, and that which has to do with its efficiency in the preservation of food, has yet to be told. Since the supply of coldness,—i. e., the temperature of the city water supply as it comes from the mains,—is inexhaustible, and is continually being renewed and thus kept constant, there is no object in shutting out, or insulating against, all fresh air. Not only are the thick and heavy walls made unnecessary, but ventilators are provided, and a positive circulation of fresh air, taken in at the top and settling as it becomes colder to pass off at the bottom, is insured. This fresh, dry air, which comes into contact with the cold pipes as soon as it enters the cooler, is immediately cooled, and therefore falls, circulating through the box following the pipe coils, and taking up and carrying off any moisture or dampness therein. The result is that the food in the cooler is kept dry as well as cold, and does not deteriorate, but will last indefinitely.

WILMAR APARTMENTS, PORTLAND
CLAUSSEN & CLAUSSEN, ARCHITECTS



Typical Floor Plan

The Ansonia Apartments—Tacoma.

HEATH & GOVE, ARCHITECTS

These new apartments have been constructed to appeal to the best class of tenants, and conveniences were installed in them which are the equal of the finest private residences. In addition to this, tenants have the advantages which only an apartment can offer.

The location is in the most fashionable residence section of this city, with fine water views and other prospects. The stories are stepped up, one above the other, so that roof gardens, with pergolas are available for the upper apartments.

The building is absolutely fire-proof; the walls being of hollow tile, the floor slabs of concrete beams with Coroval tile fillers, and all minor partitions of tile. The floors rest on the walls, which we have found to be a cheaper and more satisfactory construction than to use columns and girders.

In the design an effort is made to express domesticity. The facing brick is tapestry in grays and browns, called "Fabric," made locally, and trimmed with Tenino Sandstone. The porte cochere extending over the sidewalk is especially convenient in a damp climate. The entrance is in marble, and the reception room is handsomely furnished.

The arrangement of apartments is such that they are isolated from each other. With the windows placed as they are, practically the same privacy may be had as in a detached residence. One of the special features is the individual large balcony porches.

All chambers have large closets. In fact, the closet room throughout is unusually ample, and includes linen, china and kitchen closets. Each has dust-proof cabinets and other conveniences.

In the basement are a number of additional rooms for the servants of the tenants; to each is connected a telephone affording instant communication with the tenants' apartments. The four laundries for the tenants are located in the basement, and are equipped with tubs, ironing tables, electric irons, and provision for the boiling of clothes, and large electric and steam driers are provided.

All bath rooms are tile, and equipped with medicine cabinets, linen closets, towel racks, of white composition, and all the little conveniences of the best private homes.

Each chamber has a full mirror door, and a fire and burglar-proof wall safe is installed in each apartment. The building is equipped with an automatic electric elevator. Servants use a separate stairway.

The woodwork of all rooms except bed rooms, kitchens, and bath rooms, is of oak. In the others it is of white enamel. All floors are polished oak. The electric fixtures are elaborate and vary in the different apartments. A number of base and floor receptacles are provided. Also all closets have door switches.

A small branch post office has been established, so that each family has its own lock box.

There is an open fireplace in each living room with Rookwood tile facing and oak mantel.

The kitchens are provided with Hughes Electric Ranges, refrigerators and complete pantry cabinets, automatic electric dumbwaiter service direct from the basement, and cool closets. Individual vacuum cleaning machines are at the disposal of the tenants. Large store rooms and a fire and burglar-proof vault for furs, silverware, etc., are arranged in the basement, for the use of the tenants.

In place of the usual switchboard system, each apartment is equipped with direct private line.

The cost of the building, exclusive of the site, but including ranges, electric fixtures and shades, was $122,000, or about 25 cents per cubic foot, from bottom of footings to roof line.

Buttonlath—An Improved Lathing Material.

Continued from Page 120

erecting solid partitions with Buttonlath there is a very great saving of time and material, as the plaster may be applied at one time and the large surface that a man can cover as compared with wood or metal lath in the same space of time, means a considerable item.

In Los Angeles where Buttonlath originated and where it has been given a most thorough tryout in practically all classes of construction, the city building ordinances have been amended so as to allow the use of Buttonlath in any class of construction. During the past year, Buttonlath has been used on over two million dollars' worth of buildings costing $10,000 and upward, which would seem to indicate in graphic fashion the headway which it is making with architects generally.

Buttonlath should not be confused with inflammable pulp and paper board which is a substitute for lath and plastered walls. A Buttonlathed wall is finished with a coat of plaster and looks like any other good plastered wall free from waves and plaster cracks. Buttonlath is finished by the application of a light brown coat and a finish coat which becomes an integral part of the Buttonlath, thereby preventing failure by the parting of the first and second coats which is so often the case, particularly by the metal lath construction. Plastered walls tested to failure invariably fail by the parting of the coats and the sheering off of the keys. Buttonlath has successfully overcome both of these difficulties.

The Pioneer Paper Company, who have been known for many years as the manufacturers of Pioneer Roofing and Pioneer Building Papers, have been named as distributors for California, Arizona and New Mexico. They are enlarging their San Francisco offices, Messrs. Charles G. Gobel and F. O. Toribio being the special men in charge of this department for the Northern California territory. The San Francisco offices are in the Hearst Building. The Los Angeles offices are at 247-251 South Los Angeles Street. The company will gladly send booklet and samples together with full information, etc., to any architect or contractor upon request.

Fernand Parmentier.

Word has been received of the death of Fernand Parmentier, well-known architect of Los Angeles, and secretary of the Southern California Chapter of the American Institute of Architects, while fighting with the French troops at Seddul Bahr, in the Dardanelles, on August 7, 1915.

Parmentier was 48 years old, born in Paris, and son of a French officer who fought through the Franco-Prussian war. His mother was an Alsatian. His parents sent him to the home of an uncle and aunt in Chicago when he was fourteen years old. He attended the Chicago public schools, studying architecture in various offices. In 1890 Mr. Parmentier came to Southern California. Since that time Parmentier has planned many notable buildings. The last building he designed in that city was the $100,000 Murray Apartments in the Westlake district. Shortly after the completion of the building, he went abroad and entered the ranks as a volunteer in the French army.

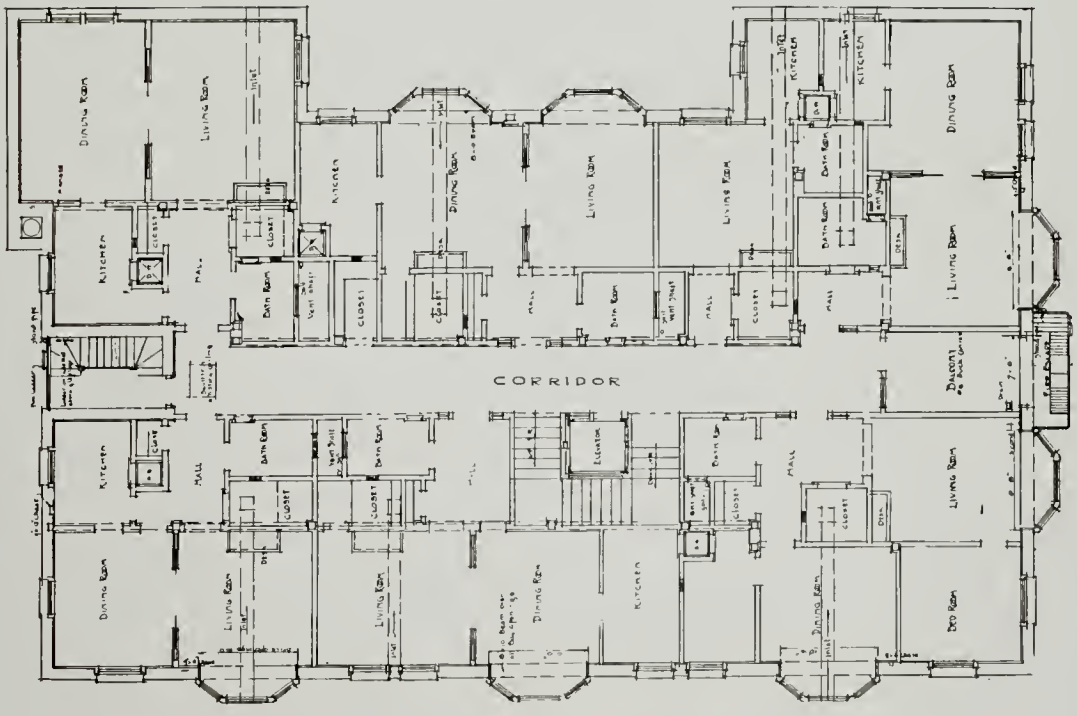
While not robust, Parmentier was a true patriot to the core, and it is impossible not to admire his bravery and loyalty.

Get-together Banquet.

The first get-together banquet of the heads of departments of the Pacific Sanitary Manufacturing Company and the Pacific Porcelain Ware Company was recently held in San Francisco. Mr. N. W. Stern, general manager of the two companies, presided, and in a short speech expressed his appreciation of the widespread recognition that had been given to the quality of "Pacific" ware.

The significant feature of the gathering was the co-operative spirit evidenced by the men present, showing a splendid organization, embodying all the advantages resultant from a close working together and common aim on the part of officers and employees alike.

NOB HILL APARTMENTS, PORTLAND
EMIL SCHACHT & SON, ARCHITECTS



Typical Floor Plan

THE ARCHITECT

VOL. XI. SAN FRANCISCO, FEBRUARY, 1916 NO. 2

EDITORIAL.

IT is still possible to plan living rooms to live in, kitchens to cook in, and dining rooms to dine in, instead of resorting to expedients, the distinction being that between living and mere existence," says Hart Wood in his article in this issue, entitled "Twentieth Century Habitation." It is no stretch of the imagination to believe these words after a glimpse of the floor plans of the new Fifth Avenue Apartment House in New York City. This new multi-family dwelling will contain everything that goes to make up convenient and even luxurious living facilities.

There will be three types of apartments, one occupying an entire floor, consisting of about thirty rooms with nine bathrooms; duplex apartments of nineteen rooms and seven baths, and simplex apartments of from fourteen rooms up, having five and six bathrooms. In each suite the foyer will open into a large gallery or salon 47.6 x 13, giving an impressive entrance. Living rooms will be from 30 x 20 feet, while there will be libraries, conservatories, and other features making the entertaining space unusually large. There will also be a number of open fireplaces, and especial attention has been given in providing ample and comfortable servants' rooms.

The individual suites will be decorated according to the fancy of the tenants and a wide latitude of choice will be permitted. Tenants who lease prior to the completion of the building will be consulted as to their choice of the woods to be employed. The schedule of rents varies from $10,000 for small simplex apartments to $21,000 for the duplex, while approximately $30,000 will be the price of an entire floor. The total gross yearly income will be in the neighborhood of $300,000.

True, it is, a reaction against the extremely compressed apartments has begun, and while this latest Fifth Avenue Apartment House, costing $1,000,000, is for people of wealth only, nevertheless the large space devoted to living and entertaining quarters is reflected in many of the moderate priced structures now being built.

J. E. R. Carpenter, the architect, has designed an attractive building in the dignified Italian Renaissance style.

* * *

Advertising men can speak more boldly than they once could about the ethics of their calling. When a profession has put its ideals into a code, it has removed the mark of experiment from its name and taken its place among accepted institutions. Medicine and the law have built up their codes by years of strict adherence to the principles of their ablest exponents. Now comes advertising with its own particular code.

Even one not familiar with the intricate mechanism of modern publicity appreciates its enormous growth in recent years. He need not be engaged in business to realize its influence. Skilled writers introduce their talking phrases into the vocabulary of his household. Wherever he turns he encounters the subtle influence of the advertising man. One morning he opens his paper to find his church is advertising its Sunday services.

If he seeks the reason for the growing dependence of readers of the printed page upon what appears in advertising type, he will learn that many publishers guarantee their readers against dishonest advertisers, that many states have enacted laws covering this matter, that first-class publications refuse objectionable and misleading copy, that advertising has its persona non grata class. He learns that these restrictions are self-imposed; that the movement for the elimination of dishonest advertising had its start within the advertising fraternity.

Advertising has gained dignity; men of affairs recognize its power and call it to their aid.

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Pacific Coast Chapters, A. I. A.

"The Architect" is the official organ of the San Francisco Chapter of the American Institute of Architects.

San Francisco Chapter, 1881—President, William B. Faville, Balboa Building, San Francisco, Cal. Secretary, Sylvain Schnaittacher, 233 Post Street, San Francisco, Cal. Chairman of Committee on Public Information, William Mooser, Nevada Bank Building. Chairman of Committee on Competition, William B. Faville, Balboa Building, San Francisco. Date of Meetings, third Thursday of every month; Annual, October.

Southern California Chapter, 1894—President, S. Tilden Norton, 604 Title Insurance Building, Los Angeles, Cal. Secretary, A. R. Walker, Hibernian Building, Los Angeles, Cal. Chairman of Committee on Information, W. C. Pennell, Wright & Callender Building, Los Angeles. Date of Meetings, second Tuesday; except July and August at Los Angeles.

Oregon Chapter, 1911—President, William G. Holford, Chamber of Commerce Building, Portland, Ore. Secretary, Joseph Jacobberger, 801 Board of Trade Building, Portland, Ore. Chairman of Committee on Public Information, Joseph Jacobberger. Date of Meetings, Third Thursday of every month at Portland; Annual, October.

Washington State Chapter, 1894—President, Arthur L. Loveless, 513 Coleman Building, Seattle, Wash. Secretary, D. R. Huntington, City Hall, Seattle, Wash. Chairman of Committee on Public Information, J. S. Cote, 520 Haight Building, Seattle. Date of Meetings, first Wednesday, except July, August and September at Seattle, except one in spring at Tacoma; Annual, November.

Colorado Chapter, 1892—President, A. A. Gove, 519 Boston Building, Denver, Colorado. Secretary, Harry J. Manning, 214 Majestic Building, Denver, Colo. Chairman of Committee on Public Information, Arthur A. Fisher, 459 Railway Exchange Building, Denver, Colo. Date of Meetings, first Monday every month at Denver, Colo.; Annual, September.

The American Institute of Architects, The Octagon, Washington, D. C. Officers for 1915: John Lawrence Mauran, St. Louis, Mo.; First Vice-President, C. Grant LaFarge, New York City, N. Y.; Second Vice-President, Milton B. Medary, Jr., Philadelphia, Pa.; Secretary, Burt L. Fenner, New York City, N. Y.; Treasurer, D. Everett Ward, 1 Madison Ave., New York, N. Y.

Board of Directors for One Year—Walter Cook, 3 West 29th Street, New York City; Octavius Morgan, 1136 I. N. Van Nuys Building, Los Angeles, Cal.; W. R. B. Wilcox, 400 Boston Block, Seattle, Wash. For Two Years—Charles A. Coolidge, 122 Ames Building, Boston, Mass.; Charles A. Favrot, 505 Perrin Building, New Orleans, La.; Elmer C. Jensen, 1401 New York Life Building, Chicago, Ill. For Three Years—Edwin H. Brown, 716 Fourth Avenue, Minneapolis, Minn.; Ben J. Lubschez, Reliance Building, Kansas City, Mo.; Horace Wells Sellers, 1301 Stephen Girard Building, Philadelphia, Pa.

Minutes of Southern California Chapter, A. I. A.

The ninety-second meeting of the Southern California Chapter of the American Institute of Architects was held at the Banquet Hall of the Bristol Cafe, Los Angeles, on Tuesday, January 11th, 1916.

The meeting was called to order at 8:15 p. m. by President S. Tilden Norton, the following members being present: J. E. Allison, J. J. Backus, F. P. Davis, P. A. Eisen, Lyman Farwell, Robert Farquhar, P. H. Frohman, Irving J. Gill, Henry M. Greene, John P. Krempel, A. C. Martin, S. B. Marston, O. W. Morgan, S. T. Norton, H. M. Patterson, T. F. Power, A. F. Rosenheim, A. R. Walker, H. F. Withey.

As guests of the Chapter were present: Mr. George C. Collins, Sales Engineer for the Spencer Turbine Cleaner Co., and Mr. John Hisserich, of the same organization; Mr. Harry Iles and Wm. Dellamore, of the "Builder and Contractor"; and W. E. Prine, of the "Southwest Contractor."

The minutes of the ninety-first meeting of members were read and approved.

For the Board of Directors, the Secretary reported the holding of one meeting, at which letter ballots were opened, and Mr. S. O. Clements and Mr. W. J. Dodd were declared unanimously elected to regular membership; that action on one letter of resignation had been deferred until the next meeting of the Board; that report was rendered by Mr. Farquhar, the Chapter's delegate to the Institute Convention on certain recommendations of the new Committee on Chapters, and the Board's action on such recommendations was referred to the next Chapter meeting for action.

For the A. I. A. Sub-Committee on Public Information, Mr. Frohman reported that their committee was carefully going over the work of other Chapters and determining upon a course to be pursued during the coming year.

For the Special Committee on Speculative Building Companies, Mr. Percy Eisen reported that the members of their committee had been in attendance on the meetings held looking toward the reorganization of the Builders' Exchange.

For the Committee on Architectural Exhibition, report was made as to the results so far attained by Miss Schmidt and urged the members to notify her as to the amount of wall space they could use.

Report was next rendered by Mr. Farquhar relative to the work of the Committee on Chapters. After a general discussion of the recommendations made by this Committee, headed by Mr. Frederick Perkins, it was moved by Mr. Krempel, and duly seconded, that this Chapter is opposed to the form of associate membership as outlined by the committee. Mr. Martin moved as an amendment to the motion that it was the sense of this meeting that the Southern California Chapter was opposed to the form of associate membership as recommended, but that should it be deemed wise, or prove necessary to the committee to retain such form of membership, that the term of such membership be reduced to two years. This motion upon being seconded by Mr. Davis was unanimously carried.

Communications were read as follows:

From the Southwest Society, expressing gratification at the Chapter's retention of membership in the Southwest Society.

From the Southwest Museum, relative to the formation of a permanent exhibition of historical Hispanic sketches in the Museum. This communication was referred to the Committee on Education, with a further suggestion that the Entertainment Committee should secure Mr. Hector Alliot at some future meeting to speak before the Chapter.

From the California China Products Co., relative to distribution of catalogues. This communication was ordered filed.

From the Executive Committee of the Building Show, Cleveland, relative to competition program. This communication was ordered filed.

From Mr. Burt L. Fenner, Secretary of the American Institute of Architects, relative to a resolution adopted at the 1915 Convention, in effect that Chapters be requested for a period between the 1915 and 1916 Conventions to admit new Chapter members only on condition that applicants agree to accept all Institute standards, and that they agree to make application for Institute membership within three years from their entrance into Chapter, or failing so to do that they terminate their connection with the Chapter. This communication was referred to the Membership Committee.

A communication was next read by Mr. A. C. Martin from Mr. Burt L. Fenner, requesting the assistance of each Chapter in opposing Congress bill No. 743, which bill authorizes the construction of a building for the Department of Justice in Washington, such protest to be registered in view of the fact that this legislation is a breach of good faith, in that Congress proposes to repudiate an obligation already incurred in good faith by a former president and his Cabinet. Upon motion made, duly seconded and carried, the Secretary was instructed to address our State Senators and Congressmen of local districts in regard to the same.

Following the above order of business, Mr. George C. Collins addressed the Chapter on the History of Vacuum Cleaning, illustrated with stereopticon views. A standing vote of thanks was accorded Mr. Collins for his most interesting and instructive paper.

The meeting adjourned at 11:30 p. m.

FERNAND PARMENTIER, Secretary.

By A. R. WALKER, Secretary pro tem

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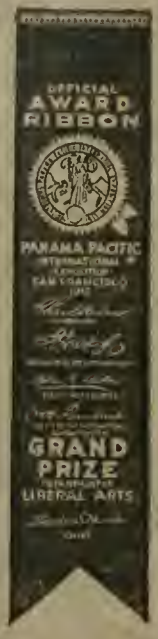

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THE ARCHITECT

VOLUME XI · NUMBER 3
MARCH · 1916

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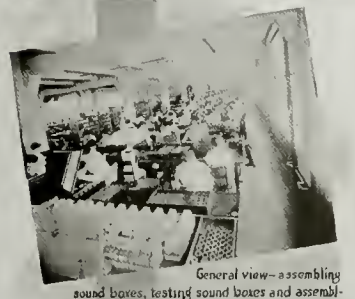
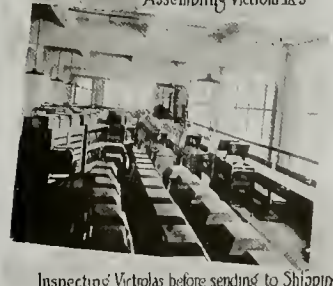


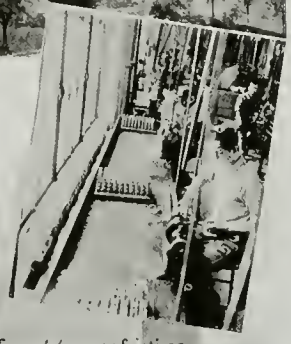
General view—assembling sound boxes, testing sound boxes and assembling governors and taper tubes

Assembling sound boxes

Assembling Victrola IX's



Inspecting Victrolas before sending to Shipping Dept.



Turning governor frictions

Drill presses drilling sound-box work and spinning machines spinning rivets in spring barrels and brake parts

Thread milling machines milling governor and turntable spindles

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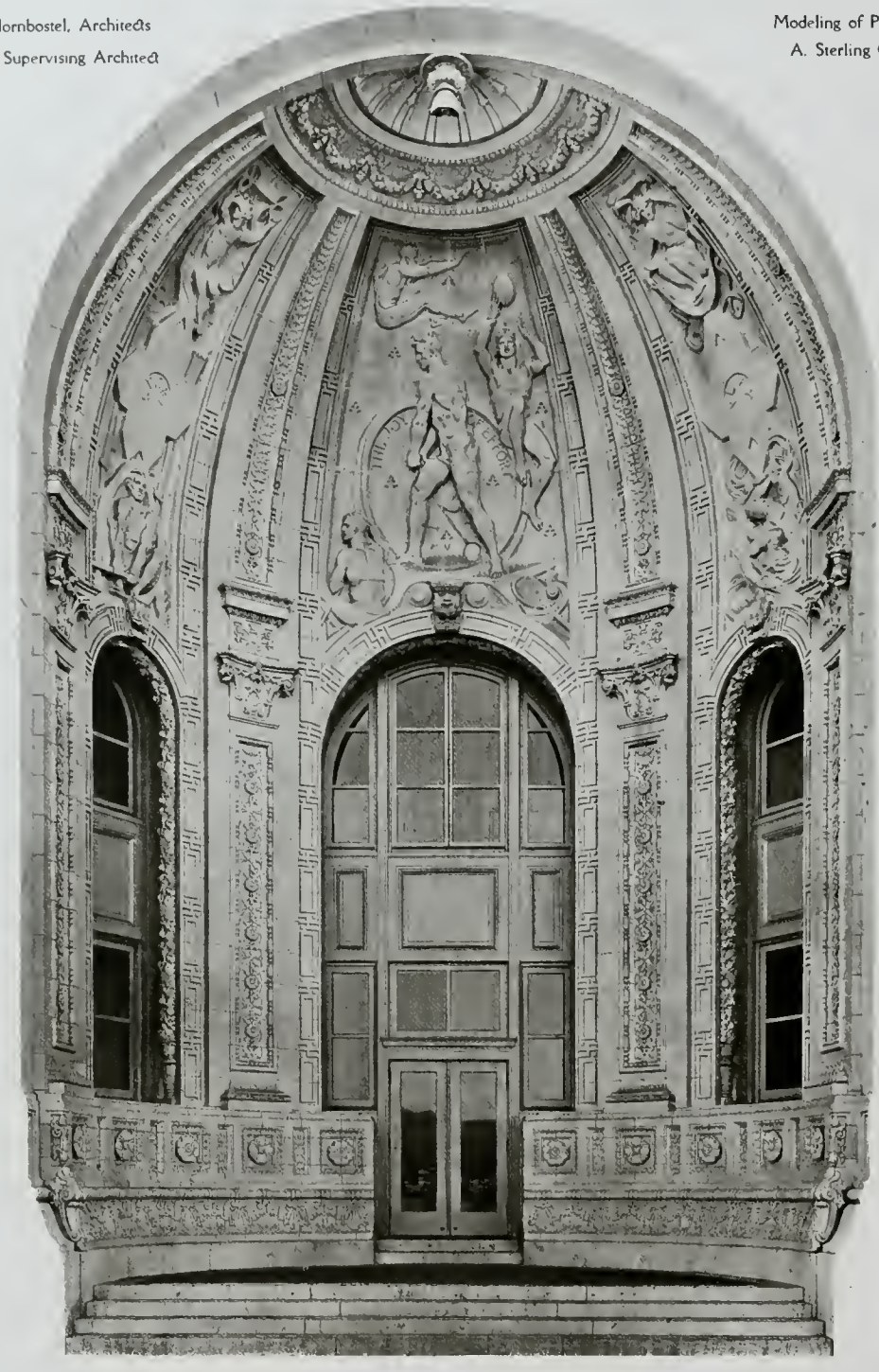
J. J. Donovan, Supervising Architect

Modeling of Panels by
A. Sterling Calder



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Vol. XI. No. 3

THE ARCHITECT

J A DRUMMOND, Publisher CLARENCE P KANE, Editor

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¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated.

COURT IN ITALIAN BUILDING
PANAMA-PACIFIC INTERNATIONAL EXPOSITION, SAN FRANCISCO
MARCELLO PIANCENTINI, ARCHITECT, ROME, ITALY

THE ARCHITECT

VOL. XI. SAN FRANCISCO, MARCH, 1916 NO. 3

Institute Wants Preservation of Art Plan.

Secretary Fenner writes letter of protest to San Francisco Chapter, against government power building site at Washington.

THE AMERICAN INSTITUTE OF ARCHITECTS.
The Octagon, Washington, D. C.,
February 12th, 1916.

DEAR MR. FAVILLE.

As you doubtless know, the Institute has undertaken to arouse public sentiment in opposition to the proposal to locate a new central heat, light and power plant in the City of Washington, on a site which will very seriously interfere with the future development of the Mall System, the water front improvements and the new Potomac Park. By an act of Congress, approved June 23, 1913, the Secretary of the Treasury was authorized to erect a building on ground owned by the Government, located on Water Street between 13th and 14th Streets, N. W., for the purpose of supplying heat, light and power to certain designated Government buildings, including the Treasury Department, the White House and other existing and contemplated buildings in that section of the city. Plans were prepared in the office of the Supervising Architect of the Treasury Department, and in December, 1915, a contract was awarded to the J. M. Cornell Company, of New York, for the erection of the building. Through what was doubtless an oversight in the Treasury Department, the plans were not submitted to the Art Commission until some time after the award of the contract. The Commission, after a thorough study, submitted an adverse report, but inasmuch as its veto is not mandatory, it appears to be the intention of the Department with the authority of Congress, to proceed with the erection of the building.

The Institute first learned of the matter on Tuesday, February 1, and immediately requested the Presidents of all Chapters to file formal protests with the Chairman of the House and Senate Conference Committees, which had under consideration an amendment to the Urgent Deficiency bill, introduced by Senator Newlands, and calling for a reconsideration by the Art Commission and the President of the United States. The responses from the Chapters were such as to leave no doubt of the vital interest which the Institute feels in the preservation of the great plan for the future development of Washington. Papers in New York, Boston and other cities also voiced their protests in their editorial columns. The Chamber of Commerce and the Merchants' Association of New York also filed vigorous protests. President Mauran spent Monday, Tuesday and Wednesday, February 7, 8 and 9, in Washington, and I was with him on the first two days. We called upon the President, by whom we were most cordially received, and who listened with great interest to what we had to say. It proved to be a matter which had not previously come to his attention, and he expressed deep concern. We called upon Senator Martin, Chairman of the Senate Conference Committee, and were accompanied in our call by five of the most distinguished engineers in the United States representing the American Institute of Consulting Engineers. We lodged a most vigorous protest with him, and were supported in our protest by the engineers, based not only on aesthetic grounds, but on engineering grounds as well. We thought we detected in Senator Martin's attitude a willingness to give due consideration to the principle for which we were contending, but an almost insurmountable difficulty in the fact that the contract had already been awarded. We also called upon Mr. Fitzgerald, the Chairman of the House Conference Committee, and two of his colleagues, and found them deeply resentful over the campaign which the Institute was conducting, entirely satisfied that the choice was a wise one and unwilling to consider a moment's delay for further consideration.

The plant, according to the drawings submitted to the Art Commission, will contain four stacks, each 16 feet in diameter and approximately 195 feet above water level. From a personal examination of the site we were able to state that a considerable portion of the stacks will be cut off from view from the White House by the new building for the Bureau of Engraving and Printing, but that they will be in full sight from the Capitol, from the Lincoln Memorial, from the grounds between the Lincoln and Washington Monuments and from East Potomac Park. This is an island park, the improvement of which is under way, and which is destined to become one of the most beautiful island parks in the world. The plant will be located directly across a narrow arm of the Potomac River, and will be the most conspicuous object in view from the park. It is not far distant from the Washington Monument. It is located directly at the Washington end of the railway bridge over which all trains approach Washington from the south, and it is, of course, in full view from Arlington and the Virginia shore.

It is extremely difficult to make people realize how great a blot on the landscape this is bound to be in the future, for at present it is in a district filled with a poor class of buildings, and to one with no vision it would seem that the site chosen is a good one. The Treasury Department has issued statements which impugn the motives of those who are opposing the site and convey the impression that they are mere cat's paws for the Potomac Light and Power Company, a company which, I believe, is now supplying some of the Government buildings. On Wednesday last a resolution was introduced in the House by Congressman Crosser, of Cleveland, for a Congressional investigation of the efforts which are being made "for motives and reasons not fully disclosed to prevent the construction of said plant." Personally, I rather welcome this move, for I do not believe that the people of the country will support Congress in its effort to browbeat persons who, from disinterested motives as good citizens, undertake to prevent what they believe highly detrimental to the National Capital, but such an investigation would be calculated to befog the real issue, filling the public mind with charges and counter-charges, while in the meantime the work on the plant goes forward. A suggestion has been made that the Capitol power plant could be enlarged to do the required work, and at a cost much less than that of the proposed plant. We do not pretend to say whether or not this is a feasible scheme, but what we do say is this—that it and all other possible schemes should be thoroughly considered. We have tried to make it clear that we are not opposing the erection of a central plant, but that our opposition is directed solely against the site chosen. It is of the utmost importance that this situation should be given the widest possible publicity, that we should endeavor to secure the support of the newspapers and to enlist art societies, civic and mercantile associations and all other bodies of citizens who take an interest in the future of the Nation's Capitol, and it is of the very essence of the present situation.

Continued on Page 151

General Conditions of the Contract.

BY FRANCIS W. GRANT *

Being the first of a series of articles discussing the code adopted by the American Institute of Architects. While many of our readers may not share the belief of Mr. Grant, we believe a general discussion of the subject will prove of interest to architects.

THE model code of general conditions forming a part of the "Uniform Documents" promulgated by the American Institute of Architects, under date of April 1, 1915, is but the latest of a series of attempts on the part of the Institute to devise some sort of contract provisions that would be worthy of adoption by the entire profession as a standard. The American Institute of Architects, without a question, represents the cream of the profession. The total membership, however, of the Institute is to the profession, as a whole, in the United States as one is to eleven. This fact alone would tend to mitigate the offence, if I should be declared presumptuous in criticising this so-called model set of general conditions, I do criticise the work as a whole, believing it to be poorly adapted to its purpose and in support of that view will proceed to comment on its provisions seriatim.

Its title, "The General Conditions of the Contract," is correct, but only so in theory. Consistency will demand, after having adopted this title, that the structural conditions be called "structural conditions of the contract"; the drawings should be labeled "drawings of the contract," and the proposal and acceptance forms should have the additional words "of the contract" tacked on.

The general conditions should be inclusive of all conditions that are general. If this be conceded it will have to be also conceded that the Institute's code of general conditions should include such clauses as "liquidated damages," "bond" and "certified check," these having general application to all bidders and not being capable of variation at the pleasure of the bidders. The Institute's code places these clauses in the bid blank, thus making them utterances of the bidder, which is contrary to the facts of the case.

Apparently without seeking thereby to secure brevity, the code of the Institute is loaded with cross references whereby it becomes necessary, in order to fully understand what one paragraph means, to read one or more of the other paragraphs or parts of them. This may be all right in text books as tending to make the student work his way as it were, but it is not the right way to write specifications or any other law.

Article I, consisting of ten lettered divisons, is partly good and partly not good. Considered separately, these may be considered as follows:

(a) The contract document consists of the agreement, the general conditions of the contract, the drawings and specifications. These form the contract.

The specification is no proper place to enumerate what several instruments combine to form the contract for the reason that that is never known at the time the specifications are written. The Institute's code names for instruments only; the agreement (properly called the contract), the general conditions of the contract (an instrument heretofore unknown but created by amputation from the specifications), the drawings and the specifications. These do not by any means constitute the entire contract in all cases or in many cases. A contract failing to have incorporated therein the printed advertisement for bids, the bid itself, the acceptance of it and all letters or bulletins issued by the architect to bidders prior to the opening of bids, for the purpose of amplifying or explaining the drawings or specifications is dangerously deficient.

(b) The owner, the contractor and the architect are those named as such in the agreement. They are treated throughout the contract documents as if each were of the singular number and masculine gender.

The first sentence of this division is wholly superfluous, and the second sentence could be better expressed if the first was eliminated.

(c) The contractor shall, as in Article 43, be responsible to the owner for the acts and omissions of his subcontractors and of all persons directly or indirectly employed by him or them in connection with the work.

Any contractor who does not know what this division states to be the case, knows very little else, and if not being the function of the specifications to teach elementary law this is a superfluity and should be omitted.

(d) The term subcontractor includes only those having a direct contract with the contractor and it includes one who furnishes material even though he does no work.

It is of no consequence to either of the immediate parties to the contract what the subrelations of the others are, as a wise architect will not, under any circumstances, recognize or direct the subcontractor as a party in interest, he need not in his specifications delve into fine points of distinction as to the definition of who shall be called subcontractors.

(e) The term "person" or "anyone" as employed herein shall be taken to include a firm or corporation.

The words "person" or "anyone" might under some circumstances need definition, but in these particular documents they do not. "Anyone" appears not at all and the only place except one that the word "person" is used this definition does not fit and in that one place, though it does fit, the addition of three words would clear up all doubt as to its full meaning.

(f) Written notice shall be deemed to have been duly served if delivered in person

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to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or mailed to the last business address known to him who gives the notice.

The definition of what constitutes legal service of papers, especially when such definition does not contemplate a departure from the established law of the land is not a proper function of the specifications, no more than would be a statement to the effect that a signature to the contract procured under duress would be invalid or any other such point of law of general knowledge.

(g) The term "work" of the contractor or subcontractor includes labor or materials or both.

Specifications should not be so written that the word "work" when used will not be self-explanatory. If the word is used in the sense meaning work and material, it will be so construed and this issue has been proved in court (see 82 Atlantic 452).

(h) When the words "approved," "satisfactory," "equal to," "proper," "as directed," etc., are used, approval, etc., by the architect is understood.

To use the words "approved," "satisfactory," "proper," "as directed," etc., without at the same time distinctly stating that they imply discretionary power on the part of the architect alone is poor specification writing.

To omit mention of the architect and expect that important point to be made clear by cross reference to a blanket clause like this, under a misleading title in the general conditions, is equally poor specification writing. As to the term "or equal," it deserves more extended treatment than is here given it and is a proper subject for the general conditions when fully covered.

(j) All time limits stated in the contract documents are of the essence of the contract.

It is of course important that time be made of the essence of the contract, but why not do so under appropriate caption as "time for completion" where it cannot possibly be overlooked?

(k) The law of the place of building shall govern the construction of this contract.

That the law of the place of building governs and not the law of Timbuctoo or Trinidad is so obviously true that the incorporation of a statement of that fact in the specifications should subject the writer to ridicule.

*Author of "Specification Writing for Architects".

INSTITUTE WANTS PRESERVATION OF ART PLAN.

Continued from Page 149

You will perhaps recall that while Thomas Jefferson was Ambassador in Paris he was called upon to procure plans for the State Capitol building at Richmond. Before his plans were finished, he learned that the building had been started in accordance with other plans. He then wrote a series of protesting letters to influential public men in Virginia, begging them to see that the work was stopped, even if there should be loss of time, which he said should not be weighed against the comfort of laying out the public money for something honorable, the satisfaction of seeing an object and proof of national good taste, and the regret and mortification of erecting a monument to our barbarism which will be loaded with execrations as long at it shall endure.

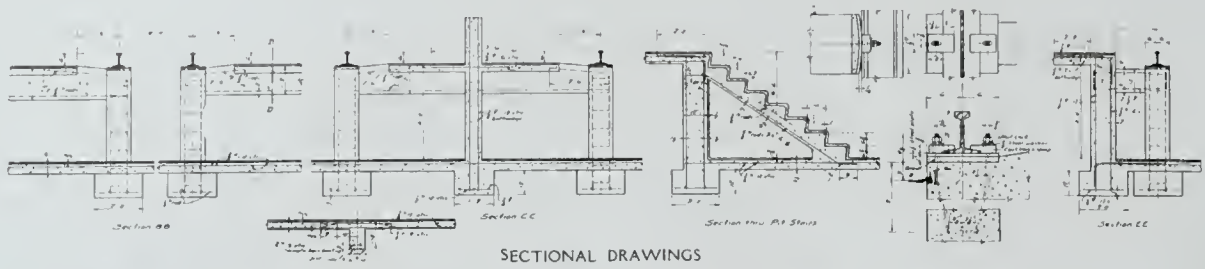
The present case is precisely similar. Let us do our utmost to support those on Congress who have a similar breadth of vision.

Yours very truly,

(Signed) BURT L. FENNER,
Secretary, A. I. A.

MR. W. B. FAVILLE,
President, San Francisco Chapter A. I. A.

CLUMBER MANORIAL HOUSE, NOTTINGHAMSHIRE, ENGLAND



SECTIONAL DRAWINGS

San Francisco's Municipal Car House.

BY REUBEN J. WOOD — Assistant Engineer, City Engineer's Office.

PERHAPS there is no one factor which is more indicative of the growth and success of San Francisco's Municipal Railway System than the various additions that have been added to the Geary Street Car House. It was in the summer of 1911 that the city made its initial bow into the field of Municipal ownership by constructing the Geary Street road, and at that time a car house was erected on Geary Street at Presidio Avenue. This building covered but a portion of the property purchased, and was capable of housing 64 cars, a repair shop, sub-station and the operating departments, all of which greatly exceeded the then existing needs of the system.

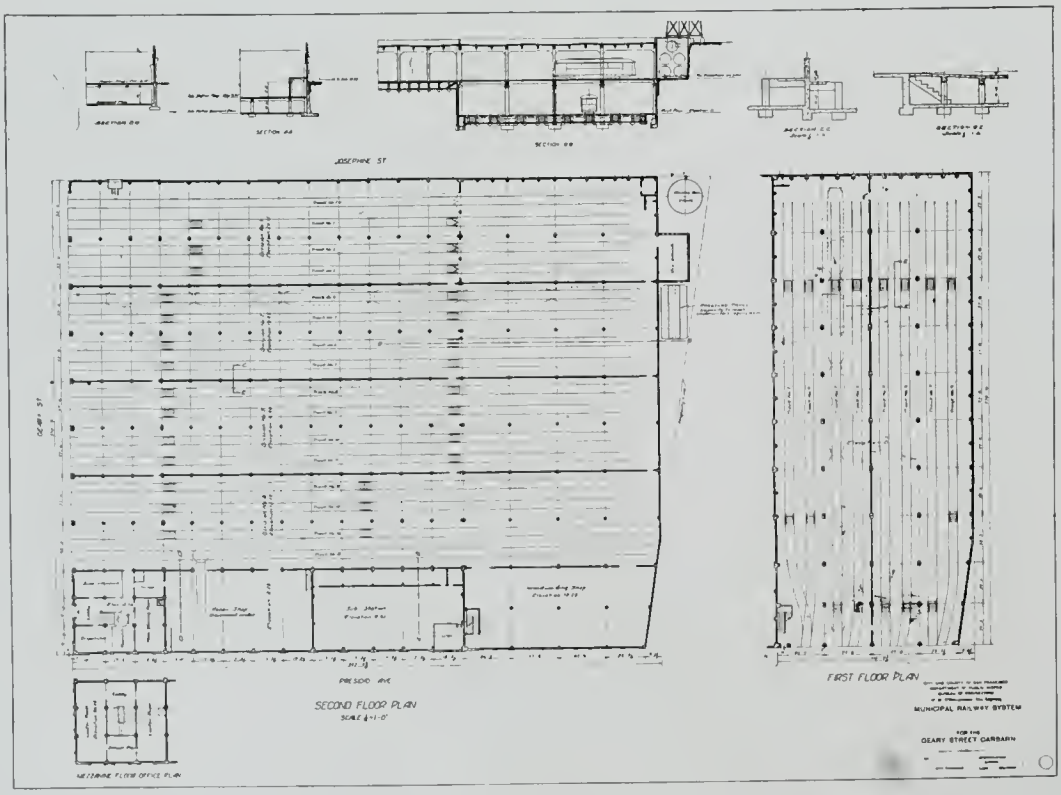
When the city decided to increase the transportation facilities to the Exposition by constructing the Van Ness Avenue and the Chestnut Street lines, 125 new cars were purchased. From an operative standpoint the present car house still occupied a central position, and a two-story addition was constructed on the remainder of the property previously acquired. This extension has a storage capacity of 70 cars, the remainder being housed in a second car house erected at Seventeenth and Hampshire Streets. As a direct result of the vast volume of traffic handled, the executive departments naturally increased in a direct proportion, and the existing offices became highly inadequate. In order to meet these needs, a second story was added to the Geary Street frontage, where the columns of the original structure had been designed to support the possible addition. This section was completed on January 1, 1916.

The Geary Street Car House, as it now stands, covers a lot 275 by 343 feet; is capable of housing one hundred and thirty-four 47-ft. cars, all of the maintenance and executive departments, and excluding the real estate, represents an investment of $435,000. It is hoped that the accompanying plans will give a clear idea of the general layout of the structure, as well as the needs of such a system from a maintenance standpoint.

GENERAL CONSTRUCTION FEATURES

The Municipal car house was constructed of reinforced concrete thruout, and when considered in its entirety is an absolutely fireproof unit. This type of building is imperative since the city carries its own fire insurance, and when we consider that each car cost $7,000, the magnitude of this responsibility can be fully realized.

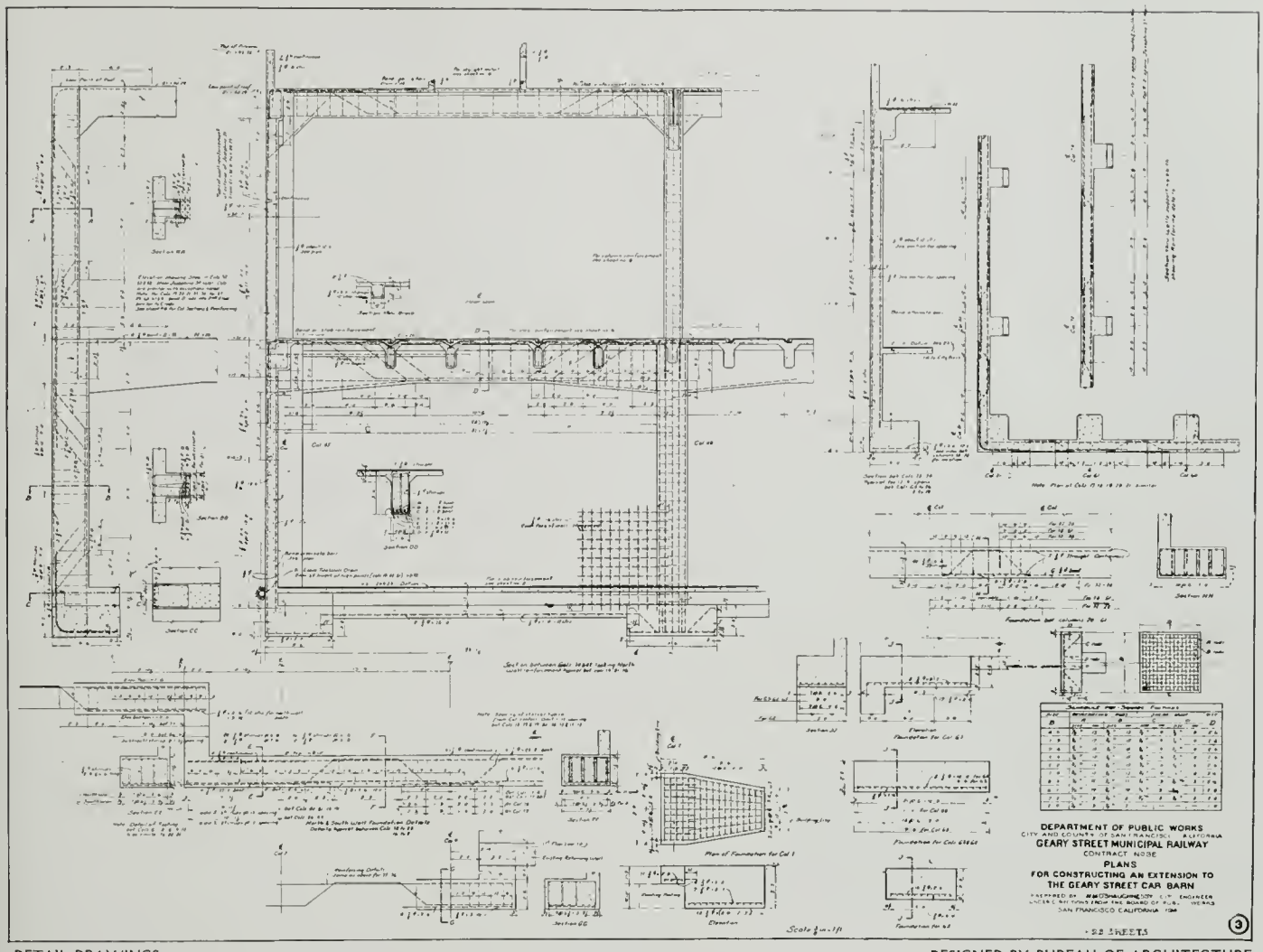
The sixteen tracks on the upper floor and the eight on the lower are divided into four track bays by means of eight-inch concrete partition walls, all connecting openings in these walls being protected with automatically closing underwriters' fire doors. All bays are closed by exterior concrete walls at the rear and Kinnear corrugated iron rolling doors on the street frontages. The roof is constructed of transverse concrete beams and a 3½-inch slab which is waterproofed with a five-ply tar and gravel roofing. In order to provide proper drainage toward the downspouts, the various concrete slabs were warped in four directions, thus eliminating the expense and dead weight of the cinder or brick fill which is usually added on flat slabs to form the proper grades. This method might not result in any material saving on small work, but a building of this size naturally means an economic repetition.



In order to secure natural light as well as ventilation, a concrete monitor, 7'-0" wide, was run continuously over each pair of tracks. Each monitor has a skylight roof glazed with wire glass, and one side is formed of continuous louvers constructed of No. 24 gauge galvanized iron.

TWO-STORY ADDITION

The grades of Geary Street and Presidio Avenue were such as to permit of the construction of this two-story addition, the first floor fronting on Presidio Avenue and the second being on the same level, and in reality but an extension of the original Geary Street floor. The retaining wall at the rear of this extension was one of the most interesting features of the design. It is 40 feet in height, and was figured to



DETAIL DRAWINGS

MUNICIPAL CAR HOUSE, SAN FRANCISCO

DESIGNED BY BUREAU OF ARCHITECTURE

withstand a fluid pressure of 30 pounds per square foot. A 12-inch vertical concrete slab carries the loads to vertical beams which are spaced 13′ 6″ on centers, the roof, second and first floors forming the supports. The unit stresses used thruout the design were as follows:

Steel	15,000	lbs. per sq. in.
Concrete in compression	650	" " " "
Concrete in shear	40	" " " "

This type of building can be constructed for approximately 11½ cents per cu. ft., which in this case means a cost of about $2,000 per car stored.

OFFICE PORTION

The office portion, which has just been completed, is 225 by 54 feet, and in conjunction with the original offices, houses the executive departments of the road, such as superintendent, bookkeeping department, claim agent, attorney, and many others. In order to make this portion of the building a flexible investment, the flat slab roof is supported by 54 ft. concrete beams, spaced 13′ 6″ on centers. These beams are 18 inches wide, 4′ 9″ in depth, and are reinforced with 15 one-inch square twisted rods. All partitions were constructed of metal lath and plaster, and if, at some future date, it becomes advisable to move the offices to some other location, this floor can be made into a gymnasium or assembly hall.

Whenever one considers a concrete building from an esthetic standpoint, the question of a proper exterior finish demands deep deliberation. Plaster finishes, as applied in the past, not only peel off, but are mottled and present a cold appearance—they lack the organic. The city has successfully solved this problem by applying one heavy coat of cement plaster by means of a cement gun, and trowelling the same to a smooth finish. Then as a substitute for the second coat of plaster, the walls are painted with two coats of some approved concrete paint. "Concreto" cement coating, which is manufactured by the Muralo Company, was used on this building.

TRACK CONSTRUCTION

The accompanying plans and sections clearly illustrate the extent and type of pit construction used. The approximate weight of a car is 27 tons, and by spacing the supporting concrete posts 6′ 0″ on centers, it was found that a 7″ 80-lb rail would sustain this load. The steel cap plate on each post was curved, in order to eliminate any spalling of the concrete, due to the deflection of the rail. The pits were drained by warping the concrete slabs toward various floor drains. The rails on the second floor of the addition were securely grouted into the supporting concrete beams. In order to prevent any possible moving of the cars, these rails were laid absolutely level, and as a result, the drainage of this section demanded special attention. The problem was solved by constructing a small gutter on the inside of each rail. The floors between rails were given a slope of one-quarter of an inch per foot toward these gutters which in turn were sloped 2″ between high and low points.

GENERAL

A 50,000-gallon wooden tank has been erected at the rear of the car house, and the City contemplates installing a complete sprinkler system at an early date. This system will include both aisle and roof sprinklers.

This building contains a complete repair shop, wood working room and paint shop, all of which are well equipped to care for the repair and upkeep of the city's cars.

The two additions to the Geary Street car house were designed by the writer, under the direct supervision of M. M. O'Shaughnessy, City Engineer.

Bernard R. Maybeck.

BY A. B. WASTELL

AS the signal was given for final curtain at the Exposition, San Francisco was gladdened by the encouragement that the Palace of Fine Arts was to remain an enduring reality of Bernard R. Maybeck's life's dream.

Although a structure of classic-romantic design, the modernity of its wooded surroundings and the placidity of its fronted lagoon, creates an atmosphere that makes a strong appeal on all classes of people, whether of high or low estate, and bespeaks the versatility and cosmopolitan character of its designer, who in marked degree, lives in and feels the spiritual significance of his ideas and sentiments before creating the form in which he embodies them.

Maybeck says: "Both music and architecture are simply vehicles for the expression of different phases of our human experience." "The keynote of the Fine Arts Palace," he states, "is sadness modified by the soothing influence of beauty." In short, "sad content."

However it may be termed, it has proven a joy to thousands of visitors, and has been the motif for unnumbered photographs, stories and rhymes as evidenced during the past holiday season by throngs of happily satisfied purveyors and purchasers of fine arts remembrances. These bear myriad names of photographers, c o l o r i s t s and rhymsters, but seldom reference to the creator. Feeling some degree of interest, as to how this rampant commercialism of his art affected the ethical ideas of the designer, an interview brought out, not the scorn of such "prostitution of art," as for effect would be the proper "stage business," but instead, a genial appreciation of the apparent joy the scattering abroad of these reproductions "of all sorts" had given the Christmas shoppers. This incident gives an interesting insight into Maybeck's homely, unassuming character, with its entire absence of pose and also illustrates his disregard of self-effacement or partial eclipse.

BERNARD R. MAYBECK -- "By his work ye shall know him."

In fact, his philosophy of life eliminates fret and worry, In fact, his philosophy of life eliminates fret and worry, through careful consideration of "what ye shall eat and what ye shall drink." He is a winsome, neighborly man, loved by family, employees, clients and friends. He is possessed of a whimsical practicality and tact that draws on a great fund of knowledge and experience, gained at home and abroad, which carries conviction in argument and ordinarily gets him what he wants. Harking back to the conditions of tight money, shaky confidence and war scare, under which the Exposition authorities labored during the construction period, we remember how estimates had to be pruned and appropriations reduced. Arguments and demands for lessened expenditures on the Fine Arts Palace were leveled at Maybeck, in broadsides, by the Works Department, but undismayed, Maybeck met the onslaught with the faith that conquers. The shrubbery and trees, the hedges of green and all the other adjuncts of his scheme must not be curtailed as proposed. He urged that the value of a few thousand dollars should not be compared with the resultant loss to the ensemble of this wonderful dreamy romantic thing he visualized, while the others could only see insurmountable financial difficulty. Patiently but persistently he strove on, listening to suggestions reasonably and sympathetically, compromising in little things, and finally he won his heart's desire.

Entirely aside, however, from stately memorial of Maybeck's art, one has but to visit the hillsides of his home city, Berkeley, to find more practical evidence of his genius as displayed in many charming homes and studios, nestling amid appropriate garniture of shrubs and trees. Berkeley has distinction, as the field for the past twenty-five years, for his fanciful creations of charming homes.

The simplicity of Maybeck's designs is a constant rebuke to the use of "gingerbread decorations," and furthermore, he seems to impart a sense of livableness and homeyness to his work. Then, too, not satisfied to leave the completed structure, he lends added touch in choice of color scheme for draperies and furniture, in harmony with the tone of the interior finish. Frequently, the departure from the conventional astounds at first glance, but the charm of his originality fascinates and grows into lasting admiration. If questioned as to the whys and wherefores, there is always a reason, and his explanations are satisfying. Aside from his experience in the University of California, he is a natural teacher, and in dealing with one of receptive mind, he always seems glad to take time to furnish information desired.

Maybeck has a really great joy in living, possesses a keen sense of humor, loves to participate in the neighborhood dances and entertainments of his favorite Hillside Club, and never indulges in "highbrow talk" in general conversation.

Although rejoicing in opportunity to design in stone, and accomplish the big things in b e t w e e n times, he utilizes wood in a variety of ways, preferably in the natural, and is, in this vicinity, the Apostle of Wood. Only recently he said when agreeing to advise in relation to housing plans for rural settlements, "I love to design little houses of few rooms—will make them all different, and give to each the naturalness and charm that make a real home."

He recently naively exemplified the fact that "a soft answer turneth away wrath." A client took him to task for what he considered the extreme colors used in stenciling the roof of a gothic interior, protesting that the colors clashed. "Why," he said, "it looks as though you had transplanted a Chinese Pagoda in here." With his courtly manner unruffled, and with customary gracious smile, Maybeck blandly replied: "You have hit it just right. I like to work with you on account of your appreciation of things different from what we Occidentals consider customary. Who are the oldest workers in wood? Who know best how to bring out the latent tones in wood by use of color effects? Why, the Koreans, the Japanese, the Chinese, and that is why we have transplanted the colors of the Pagoda. See how the wood finish that seemed flat and unpromising before, now glows and shows unsuspected color tone." The convert thereupon testified, "It is even so."

HOUSE OF C. M. SPITZER, LOS ANGELES
HUNT & BURNS, ARCHITECTS

LIVING ROOM

LIBRARY

HOUSE OF C. M. SPITZER, LOS ANGELES

HUNT & BURNS, ARCHITECTS

LIBRARY

DINING ROOM

HOUSE OF C. M. SPITZER, LOS ANGELES

HUNT & BURNS, ARCHITECTS

DRAWING ROOM

UPPER TERRACE & PERGOLA

HOUSE OF C. M. SPITZER, LOS ANGELES

HUNT & BURNS, ARCHITECTS

HOUSE OF DAN MURPHY, LOS ANGELES
HUDSON & MUNSELL, ARCHITECTS

DETAIL

COURT AND FOUNTAIN

HOUSE OF DAN MURPHY, LOS ANGELES

HUDSON & MUNSELL, ARCHITECTS

THORNEWOOD, COUNTRY HOME OF CHESTER THORNE, TACOMA

CUTTER & MALMGREN, ARCHITECTS, SPOKANE

VIEW FROM GARDENS

VIEW FROM WOODED PARK

THORNEWOOD, COUNTRY HOME OF CHESTER THORNE, TACOMA

CUTTER & MALMGREN, ARCHITECTS, SPOKANE

GARDEN

WOODED PARK AND LAWN

THORNEWOOD, COUNTRY HOME OF CHESTER THORNE, TACOMA

CUTTER & MALMGREN, ARCHITECTS, SPOKANE

MUSIC ROOM

LIBRARY

THORNEWOOD, COUNTRY HOME OF CHESTER THORNE, TACOMA

CUTTER & MALMGREN, ARCHITECTS, SPOKANE

MUSIC ROOM

LIBRARY

THORNEWOOD, COUNTRY HOME OF CHESTER THORNE, TACOMA

CUTTER & MALMGREN, ARCHITECTS, SPOKANE

LIBRARY

MUSIC ROOM

THORNEWOOD, COUNTRY HOME OF CHESTER THORNE, TACOMA

CUTTER & MALMGREN, ARCHITECTS, SPOKANE

GENERAL VIEW

VIEW FROM GARDENS

HOUSE OF CHARLES TEMPLETON CROCKER, HILLSBOROUGH, CAL.

WILLIS POLK & CO., ARCHITECTS

DETAIL

VIEW FROM SUNKEN GARDEN

HOUSE OF CHARLES TEMPLETON CROCKER, HILLSBOROUGH, CAL.

WILLIS POLK & CO., ARCHITECTS

DETAIL

DETAIL

HOUSE OF CHARLES TEMPLETON CROCKER, HILLSBOROUGH, CAL.

WILLIS POLK & CO., ARCHITECTS

GARDEN WALK

PORTECOCHERE

HOUSE OF CHARLES TEMPLETON CROCKER, HILLSBOROUGH, CAL.

WILLIS POLK & CO., ARCHITECTS

Lupton Steel Sash.

WE reproduce herewith photographs showing application of Lupton Steel Sash on two modern factory buildings. This company is prepared to furnish drawings on request showing special roof formations, types of sash with required lighting and ventilating areas, and their locations, for best results in buildings of any size and for any purpose.

It is part of the Lupton service to solve the individual problems presented in each case. David Lupton's Sons Company offer a service in this respect, backed by experience of over forty years in roof lighting and metal windows. This company produced solid rolled steel sash, welded at the old-fashioned blacksmith forge, before Hollow Metal Underwriters Windows were used. Lupton service will solve lighting and ventilating problems without charge. This company requires full data on the use of the building, location of columns, length, width and height, and other dimensions or clearances, which should be received before definite plans are made.

EASTMAN KODAK COMPANY, ROCHESTER, N. Y.
Ventilators are pivoted slightly above center, and are equipped with spring catches and chains, for which an extra charge is made. The fusible link in each chain melts at 150 degrees, and ventilators close by gravity.

The principle of the design of the Lupton products is large, solid sections, sash made of least possible number of pieces, without built-up or assembled sections that conceal corrosive surfaces; sash are of highest efficiency when made of solid sections, all welded into one piece by oxy-acetylene process. These points of construction for various types of buildings include:

For Foundries: Roof formation to aid quick removal of fumes and gases; distribution of light and ventilation; types of side wall and roof sash. Pond Truss has proven that foundries may be well ventilated by natural means under all weather conditions.

For Forge Shops: Roof formation; light and ventilation; suitable types of side wall and roof sash.

For Machine Shops: Effective distribution of light; properly controlled ventilation.

For Power Houses: Arrangement of roof levels so that heat ducts may be placed on roof over boilers; location and kind of roof sash to give direct light and ventilation to firing alleys. Power house type of side wall sash; operating devices.

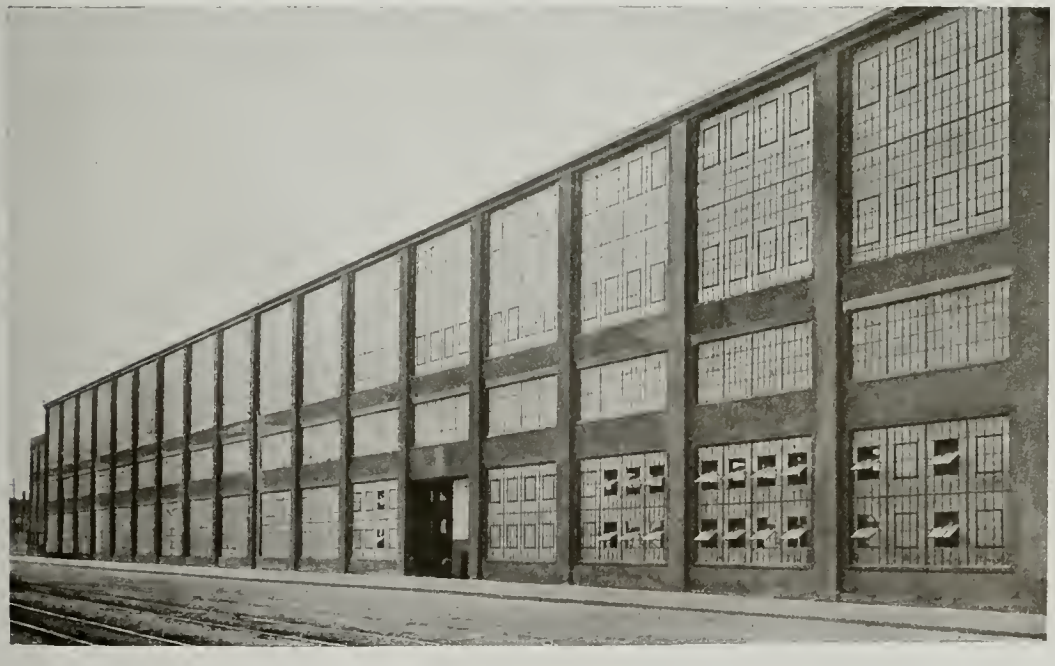
For Weave Sheds: Economical long span sawtooth roof construction; type of ventilating sash for sawtooths, which is weather-proof when open, with positive and quick control in long lines by mechanical devices.

For Multiple Story Buildings: Arrangement of sash panels between pilasters; height and position of sash to give light in center of floor spaces; amount and location of ventilating areas; most effective use of glass.

For Office Buildings: Counterweighted sash, sliding in rolled bronze double weathering; easily operated but closely fitted. Satisfied tenants, saving in fuel and low cost of efficiently weathered metal sash, more than offsets the additional cost over wood windows.

For Hospitals: Sash with ventilators opening in at top, permitting use of screens and shades, and giving ventilation without drafts. Sash made sanitary by welding all joints and fastening glass by continuous welded glazing frames.

David Lupton's Sons Company has just issued Products Service Catalogue Number Seven, showing typical installation of Lupton products. This catalogue is very complete with drawings, illustrations and including specifications for the products.



CRAMP SHIPBUILDING & ENGINE COMPANY, PHILADELPHIA, PA.
Exterior view of machine shop. The main and gallery floors are well lighted by Lupton Steel Sash in side walls, and Pond Continuous Sash in monitor.

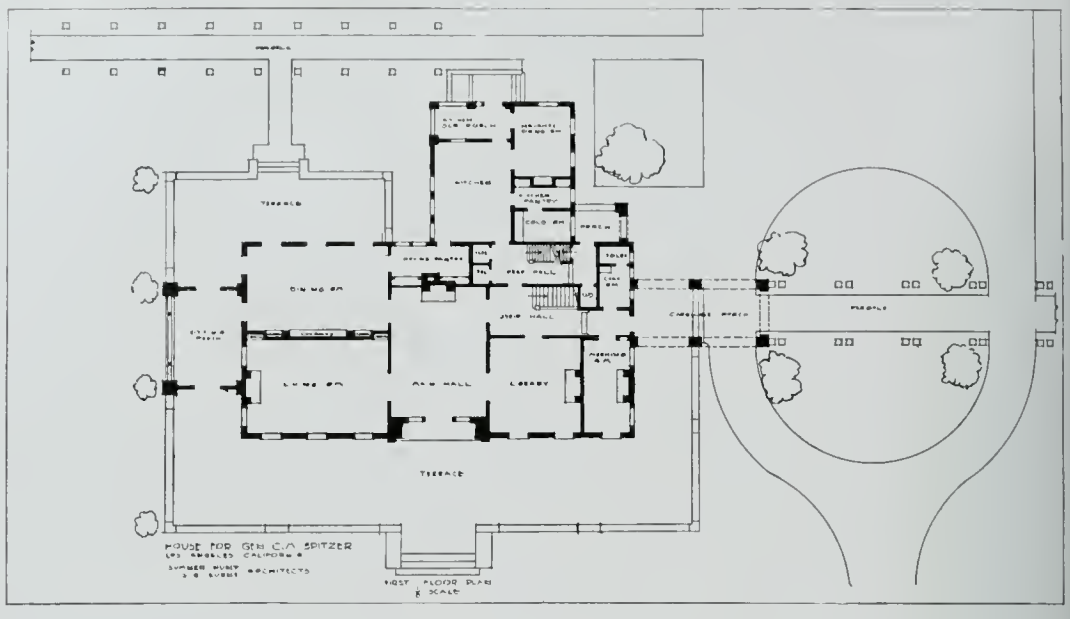
Current Notes and Comment.

WE are pleased to announce the removal of Joost Bros., hardware, San Francisco, to their new location, 1053 Market Street, opposite Pragers.

Adhering to the one principle, integrity in business, and representing as they have for many years, the celebrated Russell & Erwin Manufacturing Company "Russwin" hardware, they have gained an enviable reputation among the architects and builders throughout this entire section.

Joost Bros. have found it necessary, in order to take care of their growing business, to move into larger quarters, and we take this opportunity to extend to them our heartiest wishes for continued and greater success.

* * *



FIRST FLOOR PLAN, HOUSE OF C. M. SPITZER, LOS ANGELES

Illustrated in this issue.

H. F. Wardwell, formerly Home Office Manager, has been appointed General Sales Manager of The Detroit Steel Products Company, effective February 1st. He succeeds Mr. P. A. Smith, who recently resigned to enter another line of business.

Mr. Wardwell's previous training admirably fits him for the new duties he has assumed. He is a Cornell University Alumnus, having completed the architectural course in that institution. After graduation, he accepted a position with Albert Kahn, one of the best known architects in the country, and later joined the United States Gypsum Company.

He joined the Detroit Steel Products Company as an estimator, and speedily became head of that department. During the past few years he acted as special company representative on large building jobs, and has been instrumental in landing some of the biggest steel window contracts for his company.

During the past few months Mr. Wardwell has devoted his time largely to Home Office organization, but his experience in the field and his natural selling ability, give him every qualification for guiding the sales division of this Company's fast-increasing business.

* * * *

The Dan Murphy residence, Los Angeles, Hudson & Munsell, architects, and the house of C. M. Spitzer, Los Angeles, Hunt & Burns, architects, reproduced in this issue, were roofed with tile manufactured by the Los Angeles Pressed Brick Company. This concern has supplied considerable tile roofing for many large homes in Southern California.

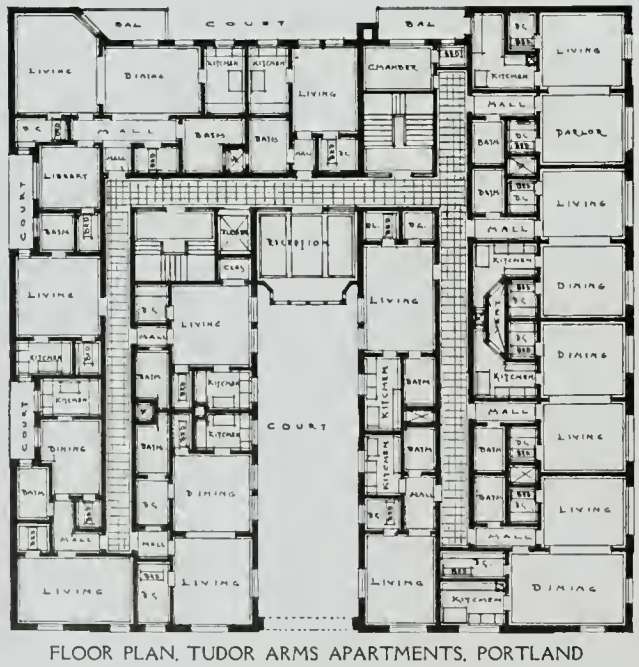
* * * *

Ambler Asbestos Building Materials are absolutely noncombustible, for the reason that they contain no combustible ingredients. The body or bulk is Portland cement concrete, consisting of hydrated silicates and aluminates of calcium, while the bonding material asbestos fibre, is a hydrated silicate of magnesia. None of these substances can take up more oxygen, and all of them are good heat and electrical insulators and can withstand quite high temperatures.

In the process of manufacture, the Portland cement and the separated asbestos fibres are thoroughly mixed together in a beating engine in the presence of an excess of water with the purpose of insuring that each individual asbestos fibre will be well coated with colloidal cement and that plenty of water will be provided for the hydration of the latter.

Subsequently the glue-like mass is taken up in thin sheets in a modified paper board machine, the sheets being superimposed until the desired thickness is obtained. This method of fabrication insures uniform distribution of the asbestos fibre throughout the mass, and also that the fibres will lie in planes parallel to that of the sheet, so that their tensile strength can be used to the greatest advantage in reinforcing the cement.

The material is then subjected to very high pressure in order to more thoroughly impress the asbestos fibres into the cement matrix, and also to drive out excess water and prevent voids and fissures. After the setting of the cement and proper aging, the material thereupon becomes exceedingly dense, tough and resilient, and its strength improves with age.



FLOOR PLAN, TUDOR ARMS APARTMENTS, PORTLAND

Showing placement of the Universal Wall Bed H. E. Simpton & Co., San Francisco Agents

THE ARCHITECT

VOL. XI. SAN FRANCISCO, MARCH, 1916 NO. 3

EDITORIAL.

REPRINTED in this issue is a letter from Secretary Burt L. Fenner, of the American Institute of Architects, calling attention of Western architects to the grave danger of a new government power building and its site, which will impair the beauty of the city of Washington. Similar communications have been mailed to other Chapters, and concerted action is being aroused against the erection of the plant on the proposed site.

Although very apt to be misunderstood, and judged from Mr. Fenner's letter, very greatly hampered by certain Washington Congressmen, members of the Institute are to be commended for their strong stand on this important question. As the work of architects is as little understood by the general public as any other profession, mayhap they are more liable to criticism, but the men directing this protest are too well known to the world at large, for any doubt to be raised about their activities being directed in any channel other than benefit to the higher elevation of art.

The vast improvements in government and other public architecture during the past quarter of a century have been due, in no small sense, to the efforts of the Institute. The work of its members has been influential in movements for civic improvement, city planning and other topics outside of the mere designing of a building, and all of which have bearing upon the elevation of art.

Secretary Fenner reports that Mr. Fitzgerald, the Chairman of the House Conference Committee, and two of his colleagues, to whom a vigorous protest was directed, were deeply resentful over the campaign which the Institute was conducting.

Why these men should be resentful is beyond our ken, especially so, when the standing of the individuals responsible for the protest is taken into consideration.

It is not necessary to state that the Institute has within its active membership all the architects of this country of high professional character. Former President Roosevelt was not adverse to receiving suggestions of this body, as during his tenure of office, the Institute was instrumental in having him appoint a Bureau of Fine Arts, which, composed of architects, painters, sculptors and landscape architects, should have charge of all government art projects.

It is the hope of Secretary Fenner and his colleagues that all Chapters and members will endeavor to spread broadcast such information as will enable public bodies to know of the proposal to erect in Washington a power plant with high stacks, on a site in direct view from the Capitol and other important points in Washington, and in full view of passengers on many trains approaching the city.

Opponents of the proposition declare that such a plant, with four huge smokestacks, would seriously interfere with the future development of the Mall system, the water-front improvements, the new Potomac park, and the whole scheme of the beautifying of the nation's capital. In Washington it is believed that through an oversight the plans were not submitted to the Art Commission until some time after the award of the contract. The Commission, after a thorough study, submitted an adverse report, but inasmuch as its veto is not mandatory, the department intends, with the authority of Congress, to proceed with the erection of the building.

President William B. Faville, of the San Francisco Chapter, has already sent telegrams to Washington, and similar protests from other parts of this country, it is trusted, will bear fruit.

The San Francisco Chapter of the A. I. A., has sent telegrams to Hon. Woodrow Wilson, President of the United States; Senators James D. Phelan and John D. Works of California, Congressmen William Kent and Julius Kahn of California and Senator John J. Fitzgerald of New York.

No person of any comprehension, and least of all, a Congressman, should question the principle the architects are striving to maintain. The work of beautifying the city of Washington is an inheritance entitled to the respect of officials, not only of our day, but of future generations. The plan for beautification, as adopted by the Art Commission, is now under way, and the erection of a power plant on the proposed site will be a blot on the landscape.

The best thought has been directed for this great art work, and if it is to obtain merit in its placement, the deliberate artistic expression of the generation erecting it should be held too sacred a character for disabuse by government officials who seek to impugn the motives of public-spirited men striving for a principle so keenly felt and desired by a majority of our citizens. If Congressional committees and Treasury Department officials insist upon haphazard placements as against the advice of the Art Commission, it will not only be a blot on the landscape but a blot on this generation.

The great cities and capitols of the world have spent millions in acquiring and improving their water-fronts for the combined uses of business and pleasure. The water-front of Washington already belongs to the Government, and may be improved at small expense compared with what such improvements have cost other cities.

An enlargement of the present Capitol power plant would serve every purpose now sought, and would also accommodate, in addition to the buildings it is proposed to heat from the above-mentioned new Power House, the Navy Yard, War College, Government Printing Office, Pension Bureau, Patent Office and the Land Office. The line points to the site of the present Capitol Power House.

The Nation that caused this park and riverside to be hallowed and consecrated with monuments which are destined to be an inspiration to millions of American citizens will never forgive any desecration.

The question is a grave one, as indicated by Secretary Fenner's writing. Chapter officials have indicated the way to prevent the step being taken, and the members of the profession, by continual suggestion through the local press and to the city officials and public-spirited citizens, will be taking part in a work eminently commensurate with their efforts.

It is hoped through the united efforts of the Chapters of the A. I. A. scattered throughout America that enough pressure can be brought upon the officials at Washington so that the plan for the National Capitol shall be executed in its full beauty and not marred by avoidable blemishes.

RESIDENCE OF F. C. VAN SCHAICK. FOREST HILL, SAN FRANCISCO

Pacific Coast Chapters, A. I. A.

"The Architect" is the official organ of the San Francisco Chapter of the American Institute of Architects.

Minutes of San Francisco Chapter, A. I. A.

January 20th, 1916: The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held at the Tait-Zinkand Cafe, 168 O'Farrell Street, on Thursday evening, January 20th, 1916.

The meeting was called to order at 8:15 by Mr. Edgar A. Mathews, in the absence of the President, Mr. W. B. Faville. Eighteen members were present.

Minutes: The minutes of the meeting held on November 18th, 1915, were read and approved.

Board of Directors: Nothing to report.

Committee on Competitions: Mr. W. B. Faville, for this committee, had nothing to report.

Housing Committee: Mr. John Bakewell, Jr., for this committee, had nothing to report.

Committee on Legislation: Mr. Edgar A. Mathews, for this committee, had nothing to report.

Committee on Relations with Contractors' Affairs: A letter was read from Mr. G. Alexander Wright, asking what action should be taken with reference to the adoption of the Uniform Contract and inquiry as to its conformity to the laws of California.

Committee on Relations with Home Industry League: Mr. Krafft stated that a meeting would shortly be held to which the Architects would be invited.

Committee on Relations with Chamber of Commerce: Mr. J. Stewart Fairweather, for this committee, had nothing to report.

Committee on Relations with Civic League: Mr. Sylvain Schnaittacher, for this committee, had nothing to report.

Committee to Follow Up Matter of Competition for State Building: Mr. Mooser stated that a portion of the bonds had been sold and it is presumed that a competition would be shortly inaugurated.

The following report on the forty-ninth annual convention submitted by Mr. John Galen Howard, was read:

January 7, 1916.

San Francisco Chapter, A. I. A.,
233 Post Street, San Francisco.

GENTLEMEN:

I beg to report as delegate from the San Francisco Chapter to the convention of the American Institute of Architects held in Washington, December 1st, 2nd, 3rd, 1915. As Mr. Faville, Mr. Schnaittacher and Mr. Mooser were unable to attend, I was the only representative of this Chapter, carrying the proxies of all my colleagues. Upon examination, the officers of the Institute decided that I was empowered to vote only two proxies in addition to my own vote, in accordance with the rule of the Institute.

Opposition to the revision of the constitution as proposed by last year's Committee on Chapters having arisen in some of the Chapters, this matter was put over for another year, and a new committee appointed under the chairmanship of Mr. Frederick W. Perkins, of Chicago. The committee is made up of single representatives from each Chapter. I have accepted the President's appointment to represent San Francisco. As a preliminary to the work of the new committee, the convention voted "as the sense of the meeting" that no probationary class should exist within the Institute.

Although the Constitution and By-Laws were not revised in toto as proposed when the Institute officers visited San Francisco in October, certain detailed modifications were passed, some of which are more or less radical.

Elections to Institute membership are hereafter to be made by the Board of Directors of the Institute acting upon individual applications by Chapter members made directly to the Board without action by the Chapters themselves. During the coming year the initiation fee will be waived, and the Board of Directors will not require an examination of applicants of a given Chapter proposed by the unanimous endorsement of the Institute members of that Chapter, subject however, to the provision that announcement of application will be sent to all Institute members, and privileged communications requested.

The convention voted that it was "the sense of the meeting" that Chapters should take in no Chapter members during the coming year unless they sign an agreement to apply for Institute membership within three years, and that failing election as Institute members, they will withdraw from Chapter membership.

Women have been specifically recognized as eligible to Institute membership, a matter which in principle has been recognized for some years, in view of the fact that certain women have been elected as members.

The convention voted to recognize in principle the equalization of expense of delegates to the convention, the detail arrangements being left for the decision of the Board of Directors.

The following officers were elected:

President, John Lawrence Mauran, St. Louis; First Vice-President, C. Grant La Farge, New York City; Second Vice-President, Milton B. Medary, Jr., Philadelphia; Secretary, Burt L. Fenner, New York City; Treasurer, D. Everett Waid, New York City. Directors to serve for three years: Edwin H. Brown, Minneapolis; Ben J. Lubschez, Kansas City; Horace Wells Sellers, Philadelphia.

In this connection I would say that having been instructed by this Chapter to vote for the regular ticket headed by Mr. Kimball, of Omaha, I cast my three votes in accordance therewith, although my personal preference would have been for Mr. Mauran. It may, perhaps, not be out of place for me to state also that I heard numerous informal expressions of regret that any Chapter should see fit to instruct its delegates, the idea being that the convention is a deliberative meeting, and that delegates should be free to vote in accordance with the dictates of their own best judgment. The membership of the Institute generally is, I judge, particularly sensitive about instruction of delegates by Chapters in which a majority of the members are not Institute members.

It will seem that most of the modifications of the Constitution and By Laws were in the interest of a largely increased Institute membership during the coming year. The Institute desires to bring into its membership as large a number as possible of the present non-Institute Chapter members, so that if possible all Chapters may be controlled by a full majority of Institute members. It is especially contributive to this movement that during the coming year initiation fees have been waived, and examinations as well when applicants are unanimously endorsed by the Institute members of their Chapter.

The convention was well attended, the meetings being held in the new hemicycle of the Corcoran Art Museum, near the Octagon. In the gallery above the hemicycle an exhibition was arranged representing the eleven schools composing the Association of Collegiate Schools of Architecture, to each of which the Institute had offered a medal for the student graduating last year with the best record for his entire course. Altogether, this place of meeting was found to be most satisfactory.

Much other valuable business was transacted by the convention, a consistent account of which will be found in the published minutes. I have mentioned only a few of the notable items, in which the members of this Chapter will probably take a special interest.

Respectfully submitted,

(Signed) JOHN GALEN HOWARD.

COMMUNICATIONS.

From G. Alexander Wright, referring to the Quantity System; from A. L. Walker, Secretary *pro tem* of the Southern California Chapter, A. I. A., relative to the expense incurred by the Southern California Chapter for the repeal of the law of 1872; from Building Material Exhibit, inviting architects to call; from Burt L. Fenner, Secretary of the A. I. A., relating to new conditions regarding Chapter and Institute Membership, and one relative to the bill authorizing the construction of the building for the Hall of Justice in Washington; from Clarence R. Ward, enclosing copy of an engrossed memorial to Mr. Karl Bitter; from the Industrial Accident Commission, in connection with safety provisions for Window Cleaners; from the California Club, relative to the resolution adopted by the Chapter in regard to their effort to acquire the "End of the Trail"; from D. Knickerbacker Boyd, enclosing a page from the Philadelphia *Record*.

Mr. Charles H. Cheney, having made the necessary application for Chapter membership, and having been balloted upon, and Mr. Chesley K. Bonestell, Jr., having made the necessary application for Associate membership, and having been balloted upon, Messrs. Bruce and Parker were appointed as tellers to count the ballots. Fifty-two ballots were received and counted, and Messrs. Cheney and Bonestell were declared unanimously elected to membership in the Chapter.

The Chair announced with deep regret the demise of Mr. Clinton Day, who passed away on January 11th, 1916. The Secretary was directed to express to the family of the deceased the deep respect for our late member, and the sympathy of the Chapter to his family in their bereavement.

The next order of business was the election of a Director to serve the Chapter for the balance of the fiscal year. Messrs. Barth and Hays, having been placed in nomination at the previous meeting, a ballot was taken, and as a result of the ballot, Mr. Barth was declared duly elected to fill the vacancy.

In the matter of Institute membership it was left in the hands of the Board of Directors to appoint a committee of Institute members to take up the matter of an increased membership for the Chapter.

The communication from the Industrial Accident Commission was referred to the Board of Directors.

The letter from the Building Materials Exhibit was referred to the Board of Directors.

The Secretary was directed to communicate with our representatives in Congress relative to a protest against the passage of House of Representative Bill No. 743.

In the matter of the communication from Mr. G. Alexander Wright, relative to the Quantity System, the Secretary was directed to send a copy of Mr. Wright's letter together with the minutes, to all Chapter members.

There being no further business before the Chapter, the meeting adjourned at 9:45 p. m.

February 20th, 1916: The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held at the Tait-Zinkand Cafe, 168 O'Farrell Street, on Thursday evening, February 17th, 1916.

The meeting was called to order at 8 p. m. by the President, Mr. W. B. Faville.

Seventeen members were present, and Mr. Green, of the Southern California Chapter, was present as a guest.

The minutes of the meeting held January 20th, 1916, were read and approved.

Competition Committee: Mr. Faville stated that Mr. Mooser would report later on the matter of the State Building at San Francisco, and that the committee had been asked for suggestions with regard to a competition for the Mt. Diablo High School District, and also in connection with a competition at San Luis Obispo.

Housing Committee: Nothing to report.

Legislative Committee: Nothing to report.

Committee on Relations with Contractors' Affairs: In the absence of Mr. Wright, there was nothing to report.

Committee on Relations with Home Industry League: In the absence of Mr. Krafft, there was nothing to report.

Committee on Relations with Chamber of Commerce: In the absence of Mr. Fairweather there was nothing to report.

Committee on Relations with Civic League: Nothing to report.

Committee on New Institute Members: Mr. Schnaittacher, for this committee, reported that seventeen applicants had been filed for membership in the Institute, and that twenty-five additional members had signified their intention of putting in application. It was probable that there would be nearly fifty new applications for Institute membership from this Chapter.

Committee to Follow Up Matter of State Building: Mr. Mooser reported that there is to be an open competition in the double form for the State Building in San Francisco, that the State Architect had been officially appointed as Advisor, and that the program was in course of preparation, and would be submitted to the Governor before being referred to the Competition Committee. It is expected that the program will be issued very shortly.

Special Committee: Mr. Schnaittacher reported that at the request of the Industrial and Accident Commission he had attended a meeting of the committee as representative of the Chapter to consider the matter of window cleaning. Among other matters discussed at the meeting were tentative rules suggested by the Commission requiring that all windows must be constructed so that they can be cleaned from the inside within a certain period, and that all present installations must be equipped with safety devices. Further meetings were to be held to determine on a set of rules affecting window construction.

COMMUNICATIONS.

From S. F. Chamber of Commerce regarding the Yosemite National Park and improvements therein; from E. C. Kemper, Executive Secretary, A. I. A., enclosing a letter from Frank B. Williams, with regard to a course of lectures on city planning, and one regarding the Jurisdiction of the Chapter; from W. Garden Mitchell, regarding Institute By-Laws; from the Building Materials Exhibit, asking for the Chapter's approval of a sign, a copy of the Rules and Regulations of the Building Materials Exhibit, Inc., and an extract from the S. F. *Chronicle* relative to their permanent display.

Mr. Walter O. Lewis, having made the necessary application for Chapter membership, and having been balloted upon, Messrs. Headman and Schroepfer were appointed as tellers to count the ballots. Fifty-two ballots were received and counted, and Mr. Lewis was declared unanimously elected to membership in the Chapter.

The matter of the communication from the Chamber of Commerce was referred to the Secretary for reply.

The letter from Mr. W. Garden Mitchell was referred to the Board of Directors, as was also the communication from the Building Materials Exhibit.

The communication relative to the territory of the Chapter was ordered received and placed on file.

Announcement was made by the Chair of the loss suffered by the Southern California Chapter thru the death of their former Secretary, Mr. Parmentier. The Secretary was directed to suitably express to the Southern California Chapter the sympathy of the San Francisco Chapter in the loss they have sustained.

Mr. Faville announced that telegrams had been sent to representatives in Congress and the Senate regarding the matter of House Bill No. 743, and also protesting against the erection of smoke stacks for a heating plant in the City of Washington, in such a position as to mar the appearance of the Mall and Washington Monument, and also called attention that the proceeds of the admissions to the Exposition on February 20th, would be used for the purpose of preserving the Marina and Column of Progress, and that as many members as possible attend.

Mr. Green was called upon, and responded with a few remarks.

The Chair announced that the March meeting would be devoted to City Planning, and that there would be representative speakers, together with officials familiar with the local situation, present.

There being no further business before the Chapter, the meeting adjourned at 9:15 p. m.

Minutes of Southern California Chapter, A. I. A.

The ninety-third meeting of the Chapter was held at the Bristol Cafe on Tuesday, February 8th, 1916.

The meeting was called to order at 7:45 p. m. by President S. Tilden Norton, the following members being present: J. J. Backus, A. B. Benton, Silas R. Burns, George Edwin Bergstrom, S. T. Clements, A. E. Curlett, F. P. Davis, P. A. Eisen, A. M. Edelman, W. E. Erkes, Lyman Farwell, R. C. Farrell, J. C. Hillman, Myron Hunt, S. P. Hunt, J. P. Krempel, A. C. Martin, H. H. Martin, S. B. Marston, O. W. Morgan, S. T. Norton, H. M. Patterson, A. F. Rosenheim, F. L. Stiff, G. F. Skilling, R. F. Train, J. T. Vawter, August Wackerbarth, A. R. Walker, H. F. Withey, J. E. Allison.

As guests of the Chapter were present: Sir Chas. F. Lummis and Dr. Hector Alliot; Mr. W. E. Prine, of the *Southwest Contractor;* Mr. Hary Hes and Wm. Dellamore, of the *Builder and Contractor;* and Mr. F. H. Wallis, a local architect.

Previous to the reading of the minutes, the order of business was set aside to permit Dr. Alliot, Curator of the Southwest Museum, to address the Chapter. Dr. Alliot's talk proved to be a very valuable educational entertainment to the members, and a hearty vote of thanks was rendered upon its conclusion.

The minutes of the ninety-second meeting of members were next read and approved.

For the Board of Directors the Secretary reported the holding of a meeting on February 8th, at which meeting the resignation of Mr. B. M. Morris was received and accepted.

The order of business was again set aside to permit Mr. Chas. F. Lummis, Secretary of the Southwest Society, to speak to the Chapter. Mr. Lummis chose for his subject, "Architecture." In a most intelligent, forceful and withal happy manner, he drove home many truths well worth the profession's attention. Upon conclusion of Mr. Lummis' talk, it was moved, seconded and duly carried, that Mr. Lummis be elected an honorary member in the Chapter.

Communications were next read as follows:

From Mr. E. C. Kemper, Executive Secretary, A. I. A., calling the attention of the Chapter to the opportunity of securing lecture engagements of Mr. Frank B. Williams, whose talks are along the lines of City Planning. This communication was referred to the Committee on City Planning.

Communications were next read from Senators and Representatives in Congress replying to the protest from the Southern California Chapter in the matter of the erection of a building for the Department of Justice. Communications were ordered filed.

From the Southern California Electrical Contractors and Dealers, a letter reciting certain resolutions of condolence on the death of Fernand Parmentier, and expressing sympathy for the Chapter's loss. Upon motion made, duly seconded and carried, this communication was ordered spread upon the minutes of the meeting.

At this time a resolution was passed that a committee be appointed by the President to frame the necessary resolutions from this Chapter. The President appointed Messrs. A. C. Martin, A. B. Benton, and August Wackerbarth.

A communication was also read from C. H. Whittaker, editor of the Institute Journal, requesting a copy of the Chapter's resolutions, etc., for publication in the Journal's March number. This communication was referred to the Secretary for reply.

For the Committee on City Planning, report was made that several meetings had been held, but with no active matters as yet to be presented to the Chapter.

For the A. I. A. Sub-Committee on Education, Mr. J. T. Vawter reported on the suggestions made by Mr. Hector Alliot on the matter of establishing a permanent exhibition in the Southwest Museum. After general discussion, by various members, it was moved by Mr. Withey, duly seconded and carried, that the committee be empowered to carry on the work.

For the Committee on Exhibition, Mr. A. F. Rosenheim reported success so far accomplished in the securing of drawings for the exhibit. It was reported that the formal opening will be held on February 15th, and that to all appearances the exhibit is going to be an undoubted success. Question having arisen as to the committee's authorization in handling the exhibition and in assuming that such exhibit was being held under the auspices of the Chapter, a resolution covering complete approval of the committee's actions was offered, duly seconded and carried.

The A. I. A. Subcommittee on Education further reported on a certain communication received from the "House Beautiful" setting forth a program of competition for small residential work, such competition to be handled under the auspices of the various Chapters in which such competition would be called, and outlining certain methods of compensation for successful prize winners. The suggestions in the report bore the approval of Mr. R. Clipston Sturgis, former President of the Institute, and bore the approval in part of the local Educational Committee. Full and complete discussion was entered into regarding the whole matter, both for and against such an undertaking furthered by the American Institute of Architects. Motion was offered by Mr. A. C. Martin that further details of the plan be secured by the committee from the "House Beautiful" Publishing Company and a further statement from Mr. R. Clipston Sturgis, and with the additional data the matter be presented at the next meeting of the Chapter. This motion received no second, whereupon it was moved by Mr. Myron Hunt that the matter be laid on the table. This motion was duly seconded and carried.

Under the head of unfinished business, report on the matter of Supervising Architect for the County was deferred until the next meeting.

The balance of the meeting was given over to musical program.

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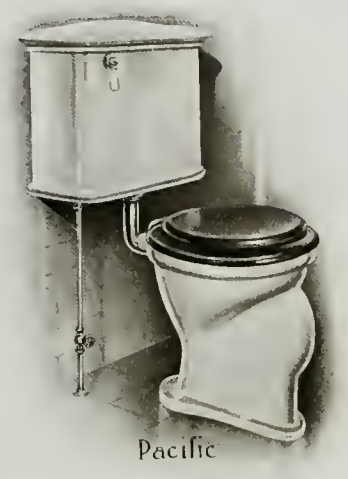

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Minutes of Washington State Chapter, A. I. A.

Minutes of regular meeting of the Washington State Chapter, January 12, 1916, *Seattle, Washington*—Present: Messrs. Loveless, Cote, Field, Josenhans, Thomas, Blair, Baeder, Parks, Stephen, Brust, Harvey, Schack, Gould, Alden, Ziegler, Storey, Sexsmith.

Minutes of the previous meeting read and with corrections approved.

Report of the Secretary; also the Treasurer's report; accountant's annual report also read by Treasurer.

Bill from American Civic Association was discussed. Mr. Alden moved and Mr. Storey seconded the motion that the Secretary write the Association telling them the state of the finances of the Chapter and assuring them of payment as soon as conditions permit. Carried.

A report from the committee appointed to investigate the invitation from the allied engineering societies asking the Chapter to join was read. Mr. Schack stated that his committee had met with Mr. Hall and Mr. Slater, of the engineers, and they had outlined to the committee the scope of the proposed organization. Mr. Schack made no recommendations to the Chapter and some general discussion was had in regard to the advisability of the Chapter's entering such an organization. Mr. Alden stated he thought the architects had no place in this proposed society, but that they would be ready and willing to act at any time with the engineers to further any matters of mutual interest. It was also noted that the funds of the Chapter were very low, and as the expenses of joining and maintaining relations with this Society were quite indefinite, it was moved by Mr. Thomas and seconded by Mr. Gould that the matter be referred back to the committee to draft a reply along the lines suggested in the discussion. Motion was carried.

There was a report from the Committee on the Bellingham School. Mr. Willatzer, Chairman, being absent, Mr. Baeder presented a written report, which was read. Mr. Thomas not having been at the previous meeting when this matter came up, asked for some further information. Mr. Blair, who had made an examination of the school for the Seattle School Board, made some general explanations, which were more explicitly entered into by Mr. Stephens, from which it was gathered that the building was most undesirable, and, in fact, a menace to public safety. Some general discussion was entered into as to the method of procedure and a number of suggestions were made, resulting in a motion by Mr. Alden and seconded by Mr. Zeigler, that a letter be written the School Board setting forth the findings of the committee and asking that an investigation be made, this letter to be framed by the committee and signed officially by the President and Secretary of the Chapter.

A report was read by the Committee on Public Information regarding a circular of information which had been referred to the committee at a previous meeting. Mr. Gould found that the matter had been up before the American Institute of Architects, with the probability that they would issue a circular for the use of all Chapters, and as this would be more valuable than a local circular, it was decided to defer action until report was had from Mr. Willcox as to what action the A. I. A. was taking. In the event that no action was being taken by the A. I. A., the committee was empowered to draft a circular and present the same for discussion at the next meeting. Mr. Gould made the motion, seconded by Mr. Alden, that a wire be sent to Mr. Willcox to inquire what action the A. I. A. was taking in regard to the circular, and if it were found that no action was being contemplated, the committee was to proceed to draft a circular and present same at the following meeting.

Mr. Alden then stated that Mr. Willcox, before leaving for the East, had indicated that he was not clear on the proceedings of the A. I. A. convention as to the expenses of delegates to future conventions, and the President directed Mr. Alden to wire Mr. Willcox that this Chapter was vitally interested in the reapportionment of the expenses of delegates to conventions, as embodied in the resolutions before the convention in December.

The President called the attention of the Chapter to a letter from the Institute regarding a bill introduced into this Congress regarding the competitions held for three large public buildings in Washington, D. C., some three or four years ago. The results of the competitions are endangered by the bill presented, and all of the architects present were urged to write a letter to the Representative of this State at Washington, registering his disapproval of this measure.

Following the regular order of business, Mr. Alden gave a most interesting talk on the conditions under which the San Francisco Exposition was built, and included in his talk were a number of most interesting slides, made mostly from photographs taken by Mr. Alden.

Meeting adjourned at 11:45 p. m.

T. C. FIELD, Secretary pro tem.

Officers of the Washington State Chapter, A. I. A.: President, Arthur L. Loveless, Seattle; First Vice-President, Joseph S. Cote, Seattle; Second Vice-President, George Gove, Tacoma; Third Vice-President, Albert Held, Spokane; Secretary, Daniel R. Huntington, Seattle; Treasurer, Ellsworth P. Storey, Seattle; Counsel, James H. Schack, Seattle. Committee on Public Information—Chairman, Carl F. Gould; members, Sherwood D. Ford, Charles H. Alden, Joseph S. Cote, Harlan Thomas.

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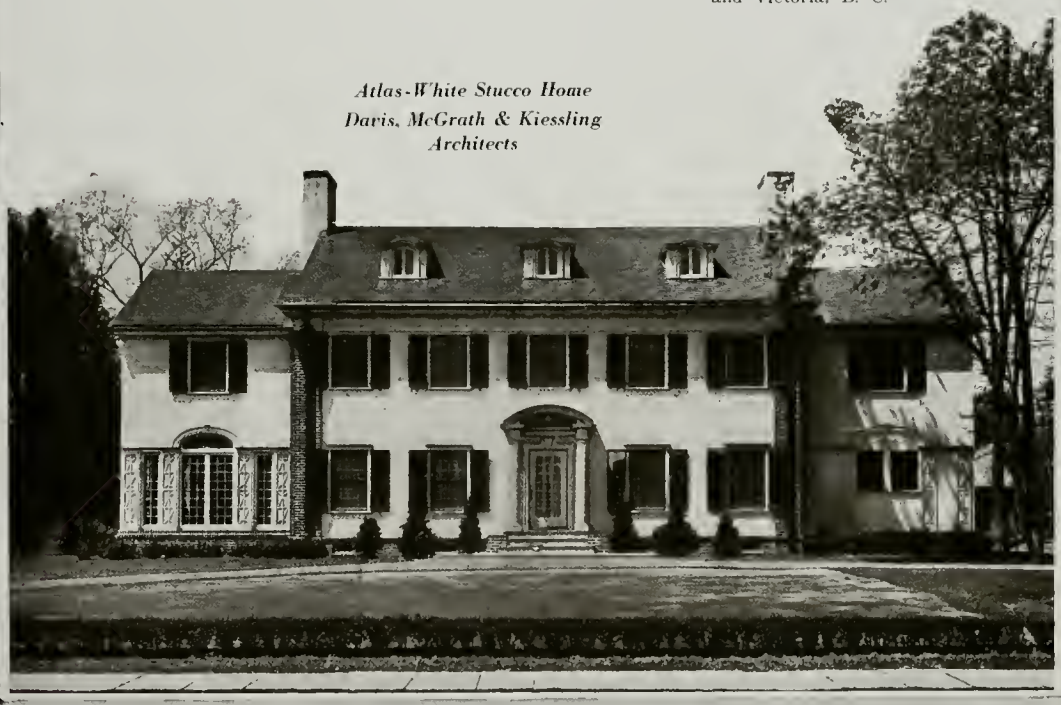

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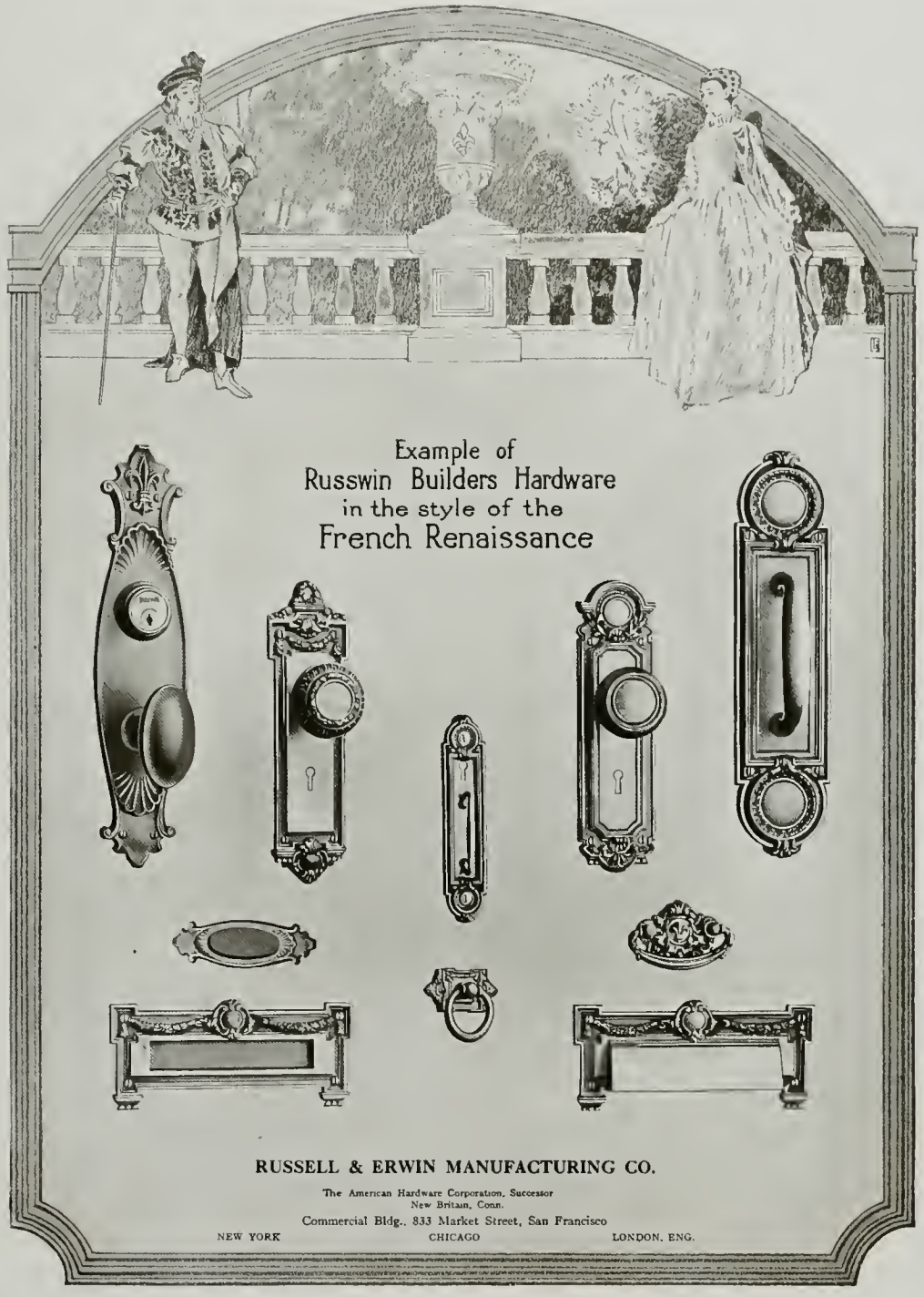

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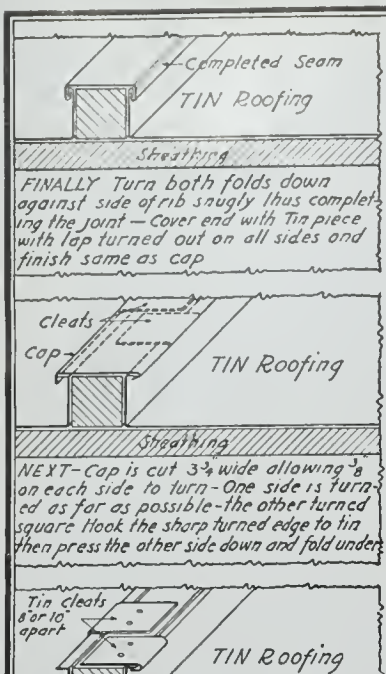
Completed Seam
TIN Roofing
Sheathing
FINALLY Turn both folds down against side of rib snugly thus completing the joint — Cover end with Tin piece with lap turned out on all sides and finish same as cap
Cleats
Cap
TIN Roofing
Sheathing
NEXT - Cap is cut 3⅜ wide allowing ⅜ on each side to turn - One side is turned as far as possible - the other turned square Hook the sharp turned edge to tin then press the other side down and fold under
Tin cleats 8" or 10" apart
TIN Roofing
Sheathing
THEN - Tin cleats, one for either side are locked over the lap and then nailed securely to the top of the ribs These cleats are usually spaced 8" or 10" apart along the entire length of Rib.
2"x2" Rib
TIN Roofing
Tin should have 1/16" clearance
Sheathing
NEXT - The tin is applied to the roof between the ribs - using either sheet or rolled TIN and turned up to stand ⅜ above the height of rib, the ⅜ is next turned out and is ready to receive the cap.
Ribs are spaced 17⅜ on centers for 2"x2" ribs and 20" width TIN
2"x2" Wood rib nailed over the roofing felt
Felt
Sheathing
FIRST - Cover sheathing with a good quality building Felt or Waterproof paper free from Tor or Acids - Then nail the wood ribs of desired size over the felt. Sheathing is laid in opposite direction to ribs
Valley
IX weight TIN in valleys and IC weight on ribs and Roof proper
Scale ¾"=1'0"
6" Open Valley
SKETCH OF VALLEY WITH RIBBED ROOFING
Tin Cap
Cleat
Tapered rib giving allowance for expansion of TIN
Felt
HERE - The rib tapers toward the bottom giving ample allowance for the expansion of the TIN. The cleats are fit snugly to the taper and are nailed to both the rib and the sheathing.
Temporary nail to hold in place until soldered
Suitable for either beveled or uneven Ribs
Nailed
Sheathing
Method particularly adopted to BEVEL or IRREGULAR RIBS Here the cap is held on by regular Flat seams on each side of the RIB
Method where similar cap is used, the cleats being fastened to the sides of the Rib instead of the top. Scale 6"=1'0".
2" 2" 2" 2"
2" 2" 1½" 2"
Four types in general use for WOOD RIBS to be covered with TIN SCALE 3"=1'0"
DETAILS SHOWING COMBINATION OF RIB & STANDING SEAM SCALE 6"=1'0"
IX TARGET AND ARROW REGISTERED TRADE MARK N. & G. TAYLOR CO. PHILADELPHIA
Ribs 2"x1½"
TIN Roofing
Scale ¾"=1'0"
ELEVATION
TIN Deck Moulding
DETAILS showing use of RIB ROOF with RAISED DECK MOULDING and flush at hips with ROOFING sunk
Rib
Rafter
SECTION
DETAIL of RIBBED ROOF where RIBS return on themselves or against DECK the height of the RIBS
For details of STONE CONSTRUCTION see sheets STONE
Ribs 2"x2"
SECTION of D
Rafter
IC weight TIN
IX weight TIN
Elastic cement
Rafter
SECTION GUTTER
ELEVATION
Scale
Use IC weight TIN for decks
Rafter
Use IC weight TIN for RIBS and ROOF proper
Ribs 2"x2"
TIN crown
SECTION D-D
crimped
Vertical Rib
Cross
Solder
X-felt
Sketch showing JOINTS on horizontal and intersection of both
Crimping
SECTION C-C
ELEVATION of RIB on the right shows CRIMPING of TIN on the sides of RIB RIBS of DOME may be made TAPERING in width from BASE to CROWN if desired.
ELEVATION of DOME shown above
Showing adaptability of TIN RIBBED ROOFING to ornamental Designs.
ELEVATION of RIBBED DOME
One half showing VERTICAL RIBS - One half sh VERTICAL and HORIZONTAL RIBS

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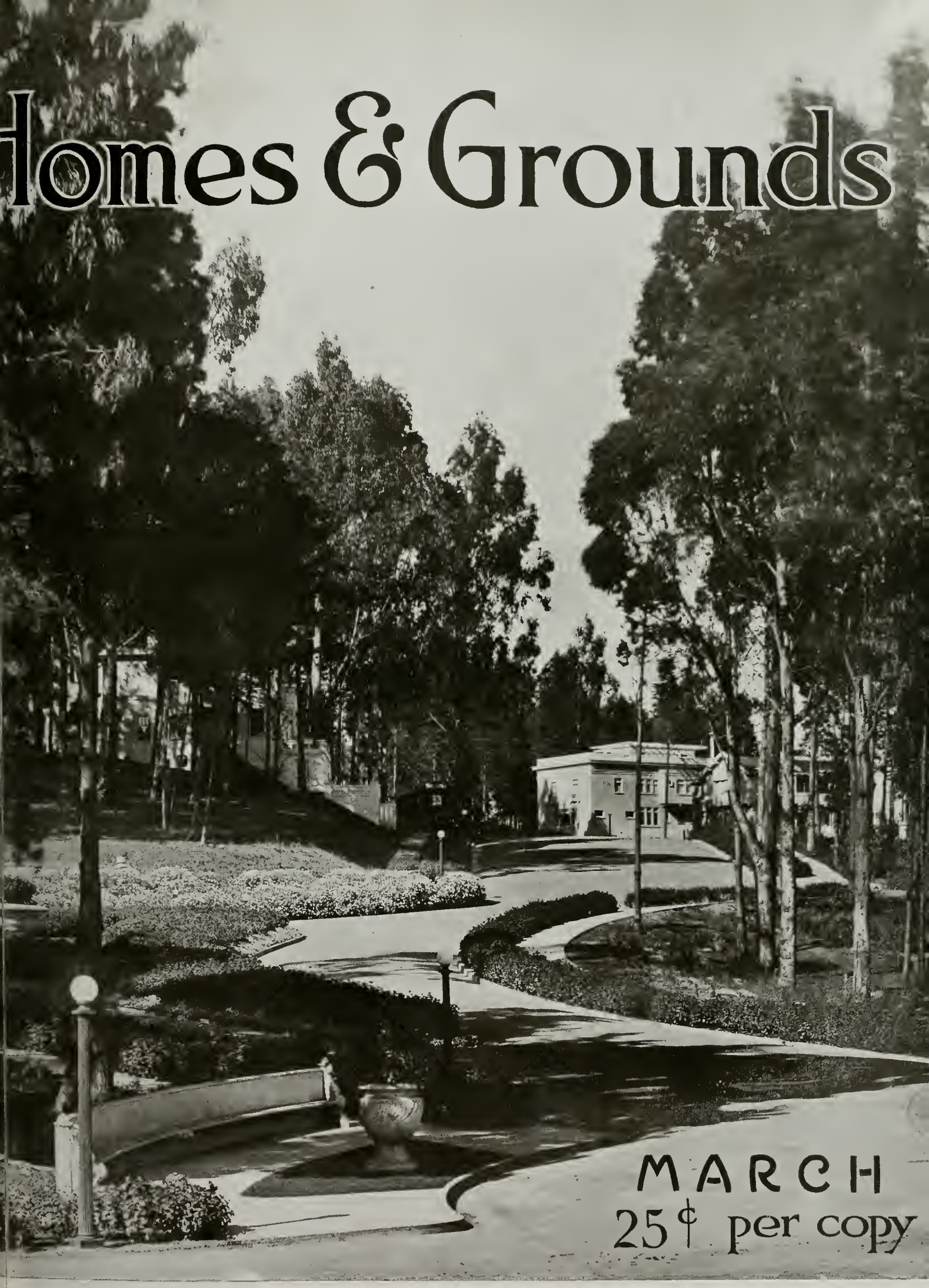

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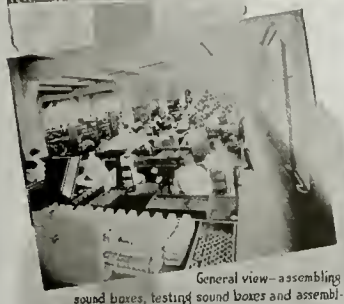

General view—assembling sound boxes, testing sound boxes and assembling governors and taper tubes

Assembling sound boxes

Assembling Victrola IX's

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Vol. XI. No. 4

THE ARCHITECT

J. A. DRUMMOND, Publisher CLARENCE P. KANE, Editor

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¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated. E. D. McDonald, Northwest Representative, Seattle, Wash.

ENTRANCE TO ANCIENT EPISCOPAL PALACE, RAVELLO, ITALY

THE ARCHITECT

VOL. XI. SAN FRANCISCO, APRIL, 1916 NO. 4

The Garden Theatre in Country Place Design.

BY GEORGE BURNAP

Landscape Architect of Public Buildings and Grounds, Washington, D. C.
Lecturer in Landscape Design, University of Pennsylvania.

THE uninitiated mind is apt to mock at the out-of-door theatre as being fantastic in our matter-of-fact American surroundings, and at best an affected importation of an alien idea for which there is neither demand nor excuse in this country. The real facts in the case, however, go to show that the open air theatre in America has come in response to a spontaneous demand,—the desire for viewing plays in out-of-door surroundings where beautiful natural scenery may be substituted for artificial stage settings. Although not indigenous to America, this form of recreation, in company with the production of pageants, masks and al fresco spectacles, is rapidly becoming naturalized to the point of being accepted, not only for purpose of civic or community expression, but also as a type of out-of-door diversion in country place life. The necessity therefore of providing means for the presentation of amateur open air theatricals has brought to the landscape designer a new problem in the detail of the modern country place,—that of the garden theatre.

The dark and mysterious Ilex tunnel, leading from the house to the garden theatre at Villa Gori, in Siena, sobers the mind for its initiation into the world of drama beyond.

The open air theatre was well recognized as a proper adjunct of the early Italian villas and we find many examples of its use as a garden feature. There still remains the quaint stage at Villa Gori near Siena, familiar for the solitary cedar which stands in mute mourning for the abandoned art which made its youthful days memorable. At Villa Sergardi there is a hedged theatre forming one side of the garden court of the Casino, and similar conceptions exist at Villa Colodi near Pescia, at Castelnuova in Palermo, and as part of the garden scheme at Isola Bella. The design of Villa Gamberaia just outside of Florence translates the idea into the form of a picturesque motif for terminating the garden vista,—a stage setting for pictorial effect rather than for use.

The average American is unfamiliar with what has been done along these lines and, at first thought of the open air theatre, turns to the great Grecian and Roman amphitheatres of antiquity, with their tremendous requirements of space and lavish expenditure of moneys. The review is discouraging and most unfortunate, for experience shows that any natural lying plot of ground from which an audience can view a stage upon which performances may take place, possesses the main requisite of the open air theatre. The Grecian or Roman theatres are not suitable prototypes for designers of today, as they were the result of the scenic productions of that time and do not meet American staging requirements. They are appropriate only for the occasional revival of Greek drama or the spasmodic presentation of Shakespearean pastorals. The open air theatres in America must be conceived from the standpoint of out-of-door performances of modern type—whether better or worse than the old order is not pertinent—and, not until open air theatres are developed which will provide facilities for typically American productions, will out-of-door plays or open air theatres receive the attention and take on the importance which they may be expected to in the recreation development of this country.

The size of the theatre commands first attention. This will usually depend more upon the size of the purse or ambition of the builder than upon physical limitations. As the open air theatre is usually developed from some natural amphitheatre formation of ground, the theatre may be as extensive as the physical properties will permit. Acoustically it is usually found that in an amphitheatre-like depression the voice carries remarkably well; and if the location for the stage is considerably below the inclined floor surface of the seating portion, the view of the performance will be very clear within reasonable distance. If any warning were to be given to the person contemplating the building of an open air theatre, it is that the amateur is liable to undertake a too pretentious project, the result of underestimating the seating capacity of his plot as well as lack of appreciation of the charm of a small intimate garden theatre.

The site must possess two primary recommendations; first a suitable level space for a stage, overlooked from a hill-side and provided with suitable scenic background; and, secondly, a sufficient slope of hill-side to serve as sounding board, and to provide unobstructed view of the stage from all points. The site may not necessarily be a wholly natural one. A certain shaping of the ground is of course permissible and in many cases necessary. In a flat country the only alternative may be to scoop out a saucer-shaped depression from a level area, but every means should be taken that the finished contour should not appear forced or the result of extensive grading. It should appear to be discovered rather than created.

The location of the theatre will usually be determined by

the site, which, as just shown, is controlled by physical characteristics of the ground. In connection with a country house the ideal location should not be too far from the residence for comfortable access. Except in rare instances, on the other hand, it should not be so close to the house as to come under its influence pictorially or to serve as a disturbing element in the off-scape of the house. If the theatre can be located in near proximity to water, the water will give vitality and diversity to the stage scene and can even be introduced as a water approach to the stage, very picturesque and effective. The presence of a small stream that could be diverted for such use should be considered a strong recommendation for a site which might otherwise seem of secondary choice.

The orientation of a theatre will usually be arbitrarily fixed by the contour, but if a slight shifting of axis is possible the vista views obtainable in the landscape composition of the background should determine absolutely the exact axial relation of theatre and off-scape. It is almost imperative that no building should obtrude in the scenic off-scape if the theatre is to be used for daylight performances, as such a modern note would in many cases present an architectural anachronism and preclude the presentation of any but modern plays. For daylight performances many sites which might otherwise seem ideal would have to be passed by if facing due west, as the rays of the setting sun in late afternoon would tend to dazzle the spectators and prove most annoying. In general the site facing south or north is most to be recommended, although for very small garden theatres where the plays would be of short duration and could be timed late in the afternoon, the sun-set effects obtainable in a theatre facing the west would warrant such orientation.

At Rosemary Farm, Huntington, Long Island, the estate of Roland R. Conklin, a spacious open-air theatre has been developed directly below the house terrace.

Olmsted Brothers, Brookline; George Burnap, Washington; Landscape Architects.

Having determined upon size, site, location and orientation there arises the question of design, which at once becomes confused with the idea of style. It is at this point that one must go carefully. "Style," writes Mr. Van Pelt, "is the imprint a particular epoch makes on art." Groping for style rather than for expression, the amateur designer in this country is conclusively impressed by the Greek and Roman examples. Analytical examination of the Greek or Roman amphitheatre will reveal that they resulted from, and were adapted to the needs of the dramatic art of that time, but are not suitable to the needs of today. The Greek theatre especially, as we know it from remaining ruins, was a chronological development of stage setting, uniquely the result of and an expression of theatrical technique of the fifth and sixth centuries before Christ.

To relieve the confusion which many will feel upon this point, it is advantageous to make a quick archiological review of the development of the open air theatre. The early theatre up to the time of Aeschylus in the fifth century was merely a circular space set aside for a religious dance about a sacrificial altar, the place being selected because of surrounding hills or mountain slopes which allowed the spectators to overlook the dance place. In order that the spectators could follow the performance without fatigue, a number of rows of wooden benches were built, but these were installed anew for each particular festal occasion. We read that all the spectators in the circular rows of the amphitheatre had an equal view of the performance from all sides of the stage.

The Greek Skene, corresponding to our modern back wall of the stage, reproduced faithfully in the Hearst Theatre of the University of California, was the product of late Grecian art, Aristotle stating in his Poetics that skenography was introduced by Sophocles. The interesting fact is that this back wall of the stage was the result of stage requirements rather than any concert of the dramatist or any desire on the part of the audience for pictorial setting or background. The original festival dance did not require a change of costume, and it was not until the drama had advanced to a point where the dancers or actors required several changes of costume that the skene was introduced. The word "skene" means small house which referred to the tent in which the actors made their change of costume. Originally this tent was at some distance from the stage, but was gradually brought nearer and nearer as demand arose for change of costume without delay. Sophocles deserves

At Villa Sergardi, Italy, the upper windows of the casino overlook the stage of the garden theatre.

the credit of having ingeniously joined the Skene to the stage and made it a fundamental part of the theatre. It was then but a logical step to develop this back wall in a way to render it architecturally beautiful. But there was no intent to portray an illusinary background as we know it today. The facade, which cut away part of the auditorium which had previously formed almost a circle around the orchestra or stage, completely revolutionized the stage business at that time; and we find that the Grecian drama from that day adapted itself to the new form of stage setting with mention made of various entrances and set rules of stage management and technique peculiar to that form of stage.

The point of this historical reference is to show that the Greek Theatre was a unique development in itself, meeting the needs of the dramas at that time, and should not be accepted as a model for the open air theatre in this country; for the inflexible conditions of the Greek type of stage prove absolutely phohibitive of the presentation of modern productions. Just as the dramas of Aeschylus, if presented in a modern theatre and according to present-day ideas, would require a multitude of scenery shifts beyond our most ambitious theatre engineers, our present-day plays are so dependent upon stage illusion that it becomes impossible to present them effectively in an open air theatre of the Grecian type. Therefore, the architectural background of stage may not be copied in modern open air theatres, either large or small, unless as previously stated, the theatre is to be devoted essentially to a revival of the early drama. It goes without saying that the stage or stage setting must be subordinate to the use of the stage, and never so superior to the production as to destroy its local character.

The axis of the garden theatre at Villa Gori focuses exactly on the entrances gateway of fore-court to the house, giving a strong architectural tie between the plan's two portions.

The two designs illustrated show two extremes of open air theatres; the one prepared for Mr. Miller of Berkeley, California, a very small intimate gardenesque type devised for the entertainment and amusement of the home circle on a midsummer afternoon; the other, which has just been completed by Mr. Roland Conklin on his country estate in Long Island, a much larger and commodious type for more lavish entertainment, intended for the presentation of large spectacles including operatic productions. The first is designed to seat not over fifty people; the second will comfortably seat three or four thousand people.

The illustrations are self-explanatory. Each design has been considered; first, with reference to acoustic and optical relation between the audience and the stage; second, with attention to stage setting and convenience of stage management; and, finally, from the standpoint of landscape composition, that the entire theatre be in keeping with the general environment. It will be noted that a gardenesque character is contemplated in the case of the small theatre by the introduction of rose arbors, hedges, and lattice work, the encircling terrace enhanced with pillars of climbing roses, —the entire effect one to give enjoyment even during the many days intervening between performances. A feature of the lattice design is false perspective to give greater distance, and the introduction of a parrot and monkey in the pattern as symbolizing imitation of voice and action. The larger theatre is developed with a cascade and lagoon, rock garden, terraces, banks planted with flowering things, and dark masses of cedars framing in promenade and proscenium, so that the prospect from the house terraces will be a scene of continual beauty independent of the occasions when performances are being given there.

The builder of a garden theatre should exhibit flexibility in the development of his project, and welcome those obstacles and retarding conditions which frequently but inevitably result in increased individuality of the design. The designer should aim for expressiveness and freedom from alien influences, for the creation of a type of garden theatre suitable to American conditions and conducive to use and enjoyment. If an open air theatre provides for utility and convenience, and expresses its purpose in a straightforward, unaffected manner, the design will be right.

The Teatro Romano at Fissole shows portions of the formal amphitheatre of seats.

* * * *

The Greek Theatre on the campus of the California State University of Berkeley is one of the finest examples of the ancient form of open air amphitheater in this country.

General Conditions of the Contract.

BY FRANCIS W. GRANT

The second of a series of articles discussing the code adopted by the American Institute of Architects.

ARTICLE 2. Execution, Correlation and Intent of Documents.—The Contract Documents shall be signed in duplicate by the Owner and Contractor. In case of failure to sign the General Conditions, Drawings or Specifications, the Architect shall identify them. Even though the signatures of the Owner and the Contractor may have been attested by witnesses they may be proved by any competent evidence.

"The Contract Documents are complimentary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is to include all labor and materials reasonably necessary for the proper execution of the work. It is not intended, however, that materials or work not covered by or properly inferable from any heading, branch, class or trade of the specifications shall be supplied unless distinctly so noted on the drawings. Materials or work described in words which so applied have a well known technical or trade meaning shall be held to refer to such recognized standards."

The first of the two paragraphs into which this article is divided is entirely irrevelant and immaterial, and the specifications should not be burdened with it. While it is customary to sign contracts in duplicate, it is not at all necessary, yet neither party can possibly avoid it if the other party desires it. In the case of drawings and specifications not signed for the purposes of identifications, the courts always have and always will accept the architect's identification of them unless fraud is charged, and in case fraud is charged, his identification would be questioned regardless of any provision in the specifications bearing upon the subject. The provision that signatures duly attested by witnesses may yet be proved, might with propriety also include the provision that such witnessed signatures may be disproved, the latter contingency being far more probable than the former. However, all of this is granted by law any way, so what is the use? The whole first paragraph of this article is superfluous, and should be eliminated.

The second paragraph is important, and its substance should be incorporated in every specification, preferably however, under a separate and more distinctive caption. The phrase "materials or work not covered by or properly inferable from any heading, branch, class or trade of the specifications" is crude. Specifications do not have trades or classes or branches, and very seldom in modern practice have headings. The concluding sentence of the paragraph is well meaning, but capable of far better expression.

Articles 3 to 9, both inclusive, are good as written.

"Article 10. The Architect's Status. — The Architect shall, within a reasonable time, make decisions on all claims of the Owner or Contractor, and on all other matters relating to the execution and progress of the work or the interpretation of the Contract Documents.

"Except as may be otherwise expressly provided in or appended to these General Conditions or as particularly set forth in the specifications, all the Architect's decisions are subject to arbitration."

The first paragraph of this article, after rewriting in a shorter form, should be added to Article 9, where it more properly belongs, and the second paragraph should appear under the caption, "Arbitration," or be discarded. A provision that none but particularly mentioned decisions of the Architect shall be subject to arbitration is safer than the provision that all but particularly mentioned decisions shall be subject to this method of bringing about a compromise.

Article 11 is good as written.

"Article 12. Materials, Labor, Appliances.—Unless otherwise stipulated, the Contractor shall provide and pay for all materials, labor, water, tools, equipment, light and power necessary for the execution of the work.

"Unless otherwise specified, all materials shall be new, and both workmanship and materials shall be of good quality. The Contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

"The Contractor shall not employ on the work any unfit person or anyone not skilled in the work assigned to him."

The first paragraph of this article is wholly unnecessary.

The second paragraph is not sufficiently definite.

The third paragraph is not bad, but is very poorly placed. The title to the article would lead no one to suspect that this important provision was contained therein.

"Article 13. Inspection of Work.—The Owner, the Architect and their representatives shall at all times have access to the work wherever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and for inspection.

"If the specifications, the Architect's instructions, laws, ordinances or any public authority require any work to be specially tested or approved, the Contractor shall give the Architect timely notice of its readiness for inspection, and the Architect shall promptly inspect it. If any such work should be covered up without approval or consent, it must, if required by the Architect, be uncovered for examination at the Contractor's expense.

"Re-examination of questioned work may be ordered by the Architect and, if found not in accordance with the Contract, all expense of re-examination and replacement shall be borne by the Contractor, otherwise it shall be allowed as extra work."

Provision for access to all work wherever in progress for purpose of inspection is in accordance with standard practice, but as written in this code the architect could demand transportation across the continent, leaving the contractor no defense but the possible result of an argument over what would be

AN INTERESTING DESIGN FOR A FIREPLACE.

THIS BUNGALOW HARMONIZES WELL WITH ITS ATTRACTIVE SETTING

proper.

In the second paragraph the architect is granted the power to require special tests by mere issuance of instructions regardless of specifications, which is unfair. It is further provided that at the instance of the architect work must be uncovered for inspection if built in, but limits the application of the provision to such work only as would have been subject to special test or special approval.

While one would naturally expect to find in connection with specification matter concerning tests, some reference to testing laboratories, their competency and the method of defraying cost of tests, this information is not given in this code. The last paragraph is very loose and vague. An argument could easily be started over the definition of "re-examination," especially in view of the statement that it is something to be "ordered" by the architect. Examinations, as the word is generally construed in building operations, are made by the architect, not ordered by him.

"Article 14. Correction of Work Before Final Payment.—The Contractor shall promptly remove from the premises all materials, whether worked or unworked, and take down and remove all portions of the work condemned by the Architect as failing to conform to the Contract; and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Owner, and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

"If the Contractor does not remove such condemned work and materials within a reasonable time, fixed by written notice, the Owner may remove them and may store the material at the expense of the Contractor. If the Contractor does not pay the expense of such removal within five days thereafter, the Owner may, upon ten days' notice, sell such materials at auction or at private sale, and shall account for the net proceeds thereof, after deducting all the costs and expenses that should have been borne by the Contractor."

Slight changes in the first paragraph would fit it for excellent service. The words, "whether worked or unworked," are entirely superfluous, and the words "so condemned" should be inserted in the sentence, stating what the contractor shall replace and re-execute.

The second paragraph is in every respect bad, and if applied in actual practice would inevitably lead to great confusion, friction, and financial tangles. The contractor's failure to correct defective work should be treated as any other breach of contract, i. e., by annulment of contract or by supplemental agreement on damages.

"Article 15. Deductions for Uncorrected Work.—If the Architect deems it inexpedient to correct work injured or not done in accordance with the Contract, the difference in value, together with a fair allowance for damage, shall be deducted, if acceptable to the Owner."

This provision, very fair and proper in substance, would be materially improved by striking out the last five words, and the substitution of the word "may" for "shall."

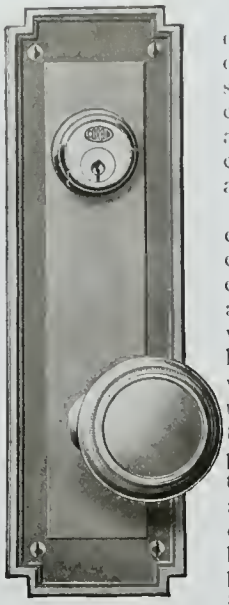
"Article 16. Correction of Work After Final Payment.—Neither the final certificate nor payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for negligence or faulty materials or workmanship within the extent and period provided by law and upon written notice he shall remedy any defects due thereto and pay for any damage to other work resulting therefrom. All questions arising under this Article shall be decided under Articles 10 and 45."

If it is sought to hold the contractor for defects after final settlement, it should in equity be for a period of time fixed in the specifications, not one varying in the different States, and capable of determination only by consulting a lawyer.

This article is faulty furthermore, in that it is inconclusive, necessitating cross reference forward and backward to get its final meaning.

(To be continued.)

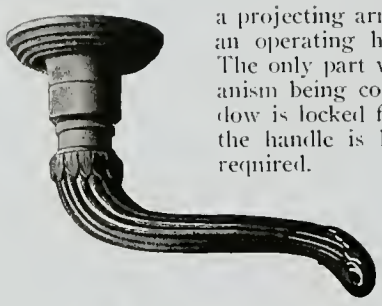
New Corbin Hardware.



Knob and escutcheon of Cooper design. School--Greek.

We have received copies of a number of circulars issued by P. & F. Corbin, of New Britain, in which new goods are shown and some of their standard specialties presented in new form. They are nicely printed in two colors upon coated paper, and show the goods in an attractive manner.

Among the new articles is a door check for coupon booth doors, consisting of the standard Corbin door check with an attachment for holding the door ajar when desired. This is used upon the doors of the booths in safe deposit vaults, in connection with a lock which automatically locks the door when it is closed, but can always be opened from the inside by turning the handle. When the booth is ready for an occupant, the attendant sets the door ajar. The depositor who wishes to use it opens the door and enters and the door is automatically closed and locked, protecting him from intrusion. When he wishes to leave, he simply opens the door and walks out, the door closing and locking itself behind him, an indicator notifying the attendant that the booth is empty. He inspects the booth to be certain that nothing of value has been left therein, removes any waste paper, and sets the door again ajar. This method has proven a safeguard against loss of articles which depositors sometimes leave by accident and which might be appropriated by some one using the booth before it has been inspected.



Lever handle in Artoise design, Louis XVI.

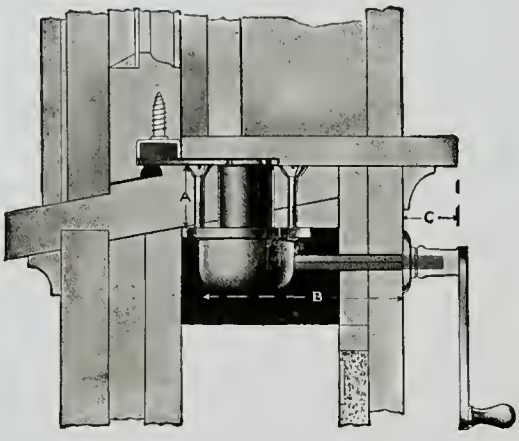
One of the folders shows the various pieces in the Corfu design of cast bronze hardware made in a paneled effect with Greek motives. The sizes adapt it for general use and the assortment includes the trim for built-in cabinets. The taste of the times shows a decided revulsion from the ornamental fittings of a few years ago, and this design is in strict accord with modern feeling. The artistic effect is obtained by the modeling of the panels, the perfect proportions and the fine finish, giving an effect of simplicity and elegance.

The Artoise design, with Louis XVI motives, is a distinct departure from conventional lines. The distinctive appearance of the knob and lever handle illustrated, is found in the other pieces. There are no large escutcheons, this design being intended for inside use only.

Corbin ball-bearing master keyed cylinder.

The demand for unusual hardware for use on bungalows has led P. & F. Corbin to add several door handles that simulate in appearance the wrought iron patterns of early Colonial days, when the village blacksmiths forged the hardware from bars of iron. The one which is illustrated herewith, is one of four shown in a circular devoted to these articles.

A casement operator for windows swinging out forms the subject of another circular which contains illustrations of detail for architects' use. This device is mounted in the window frame below the sill and stool, with a projecting arm which engages the sash, and an operating handle mounted in the apron. The only part visible is the handle, the mechanism being concealed from view. The window is locked firmly in any position in which the handle is left, no other fastening being required.



The Corbin concealed casement operator.

Knob and base in Artoise design, Louis XVI.

The Corbin pin tumbler cylinder is fully described in a monograph, and especial reference is made to the master cylinder which is meeting with favor for use in big institutions. Several of the gigantic electrical engineering plants have discarded other systems in favor of this one, and the Pennsylvania System has adopted it for exclusive use on its Eastern division, including its New York City terminal. It gives the advantages of two separate and distinct locking mechanisms, one for the change key and one for the master, with different sets of changes.

Handle for bungalow doors, in hammered effect.

One sheet, printed in colors and evidently designed for insertion in a loose leaf cover, shows a new display board for Corbin night latches. The Corbin line of night latches has had many additions lately, the entire line containing over forty different styles. To show plainly this "little lock of the people" these boards are being given to dealers, and enable the dealer to show his customer this device as in actual use.

Copies of all of these circulars will be forwarded upon request.

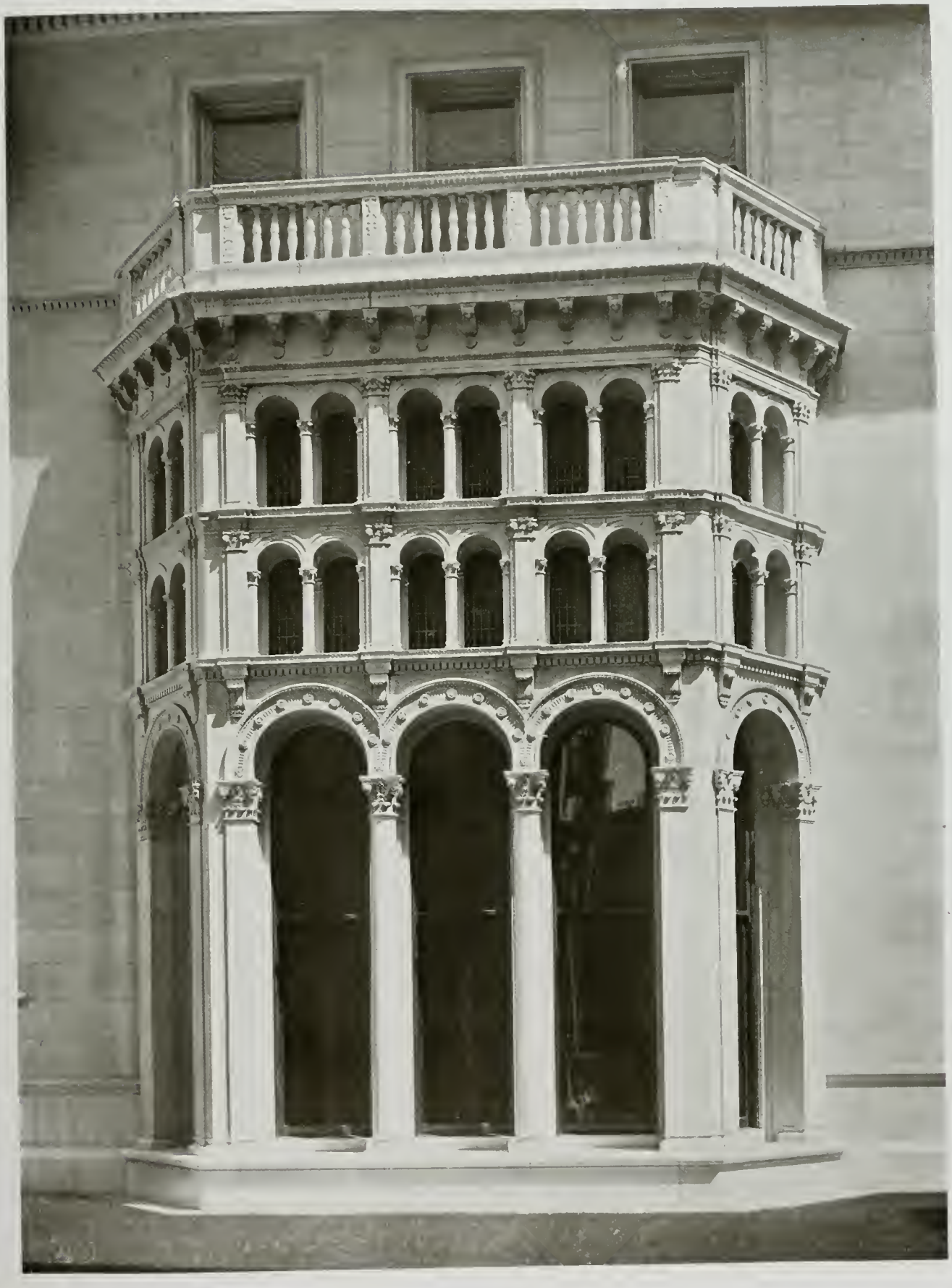
Corbin hardware is right in line with modern ideas and sure to please. The guest room knockers are the hardware man's latest contribution to the elegance of the home. Their use is borrowed from Europe, where they are found in the finest residences. They are artistic in form, and give an effective distinction, while their practical value commends them to all. P. & F. Corbin has issued a "Knocker Book," which illustrates the Corbin knockers for both interior and entrance doors. This book will be mailed on request.

Representative of the best architecture of this country, the Pennsylvania Terminal Station and the Grand Central Railway Station at New York are equipped with Corbin hardware. Corbin also issues a book on the door check, which contains full particulars on this mechanism.

Corbin night latches on the new display board.

JAMES L. FLOOD RESIDENCE, SAN FRANCISCO
BLISS & FAVILLE ARCHITECTS

DETAIL OF ENTRANCE
JAMES L. FLOOD RESIDENCE, SAN FRANCISCO
BLISS & FAVILLE, ARCHITECTS



PRINCIPAL WINDOW BAY

JAMES L. FLOOD RESIDENCE, SAN FRANCISCO

BLISS & FAVILLE, ARCHITECTS

HOUSE OF C. F. PERRY, HOLLYWOOD, CAL.
B COOPER, CORBETT, ARCHITECT

ENTRANCE FRONT

HOUSE OF C. F. PERRY, HOLLYWOOD, CAL.

B COOPER CORBETT, ARCHITECT

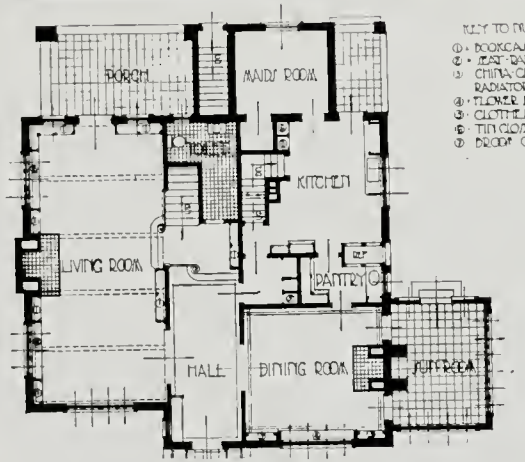
DETAIL OF ENTRANCE
HOUSE OF C. F. PERRY, HOLLYWOOD, CAL.
B. COOPER CORBETT, ARCHITECT

CHAMBER

LIVING ROOM AND HALL

HOUSE OF C. F. PERRY, HOLLYWOOD, CAL.

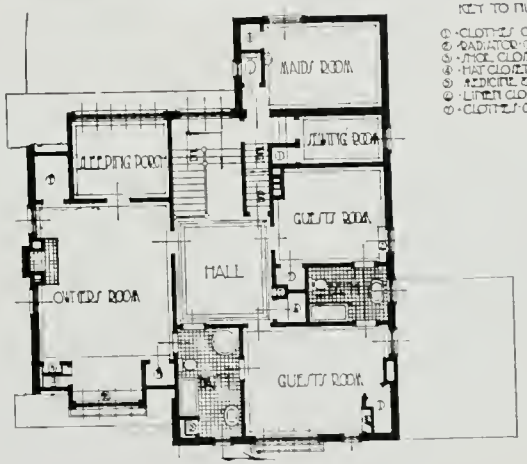
B COOPER CORBETT, ARCHITECT



KEY TO NUMBERS
① - BOOKCASE
② - SEAT-RADIATOR UNDER
③ - CHINA CLOSET WITH RADIATOR UNDER
④ - FLOWER BOX
⑤ - CLOTHES CHUTE
⑥ - TIN CLOSET
⑦ - BROOM CLOSET

FIRST FLOOR PLAN

SECOND FLOOR PLAN



KEY TO NUMBERS
① - CLOTHES CLOSET
② - RADIATOR COVERED
③ - STOOL CLOSET
④ - HAT CLOSET
⑤ - MEDICINE & LINEN
⑥ - LINEN CLOSET
⑦ - CLOTHES CHUTE

HOUSE OF J. ARNOT RATHBONE, ELMIRA, N.Y.

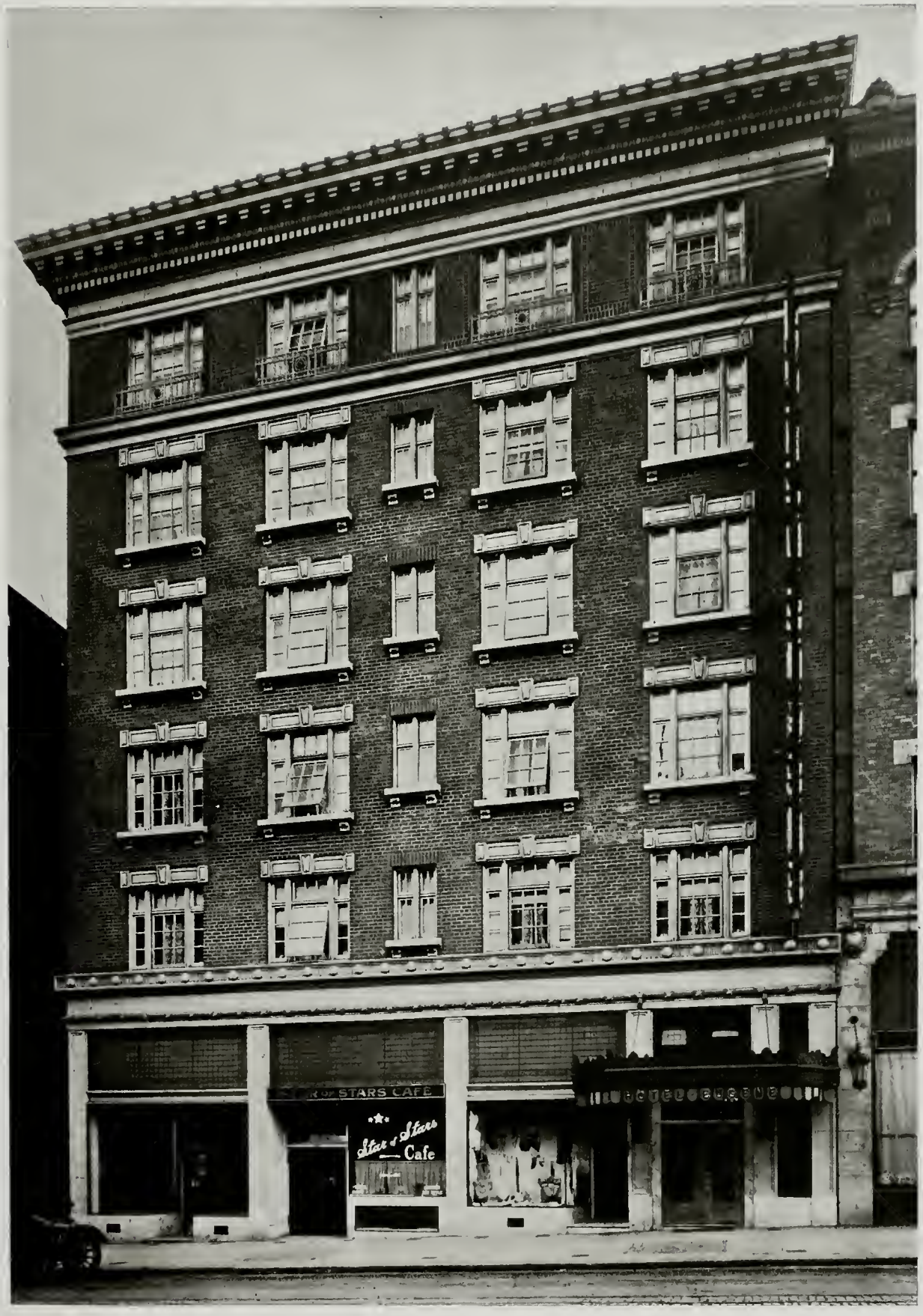
CONSIDINE & HASKELL, ARCHITECTS

DINING ROOM

LIVING ROOM

HOUSE OF J. ARNOT RATHBONE, ELMIRA, N.Y.

CONSIDINE & HASKELL ARCHITECTS



HOTEL EUGENE, SAN FRANCISCO
SYLVAIN SCHNAITTACHER ARCHITECT

HEALD'S BUSINESS COLLEGE, SAN FRANCISCO
SYLVAIN SCHNAITTACHER, ARCHITECT

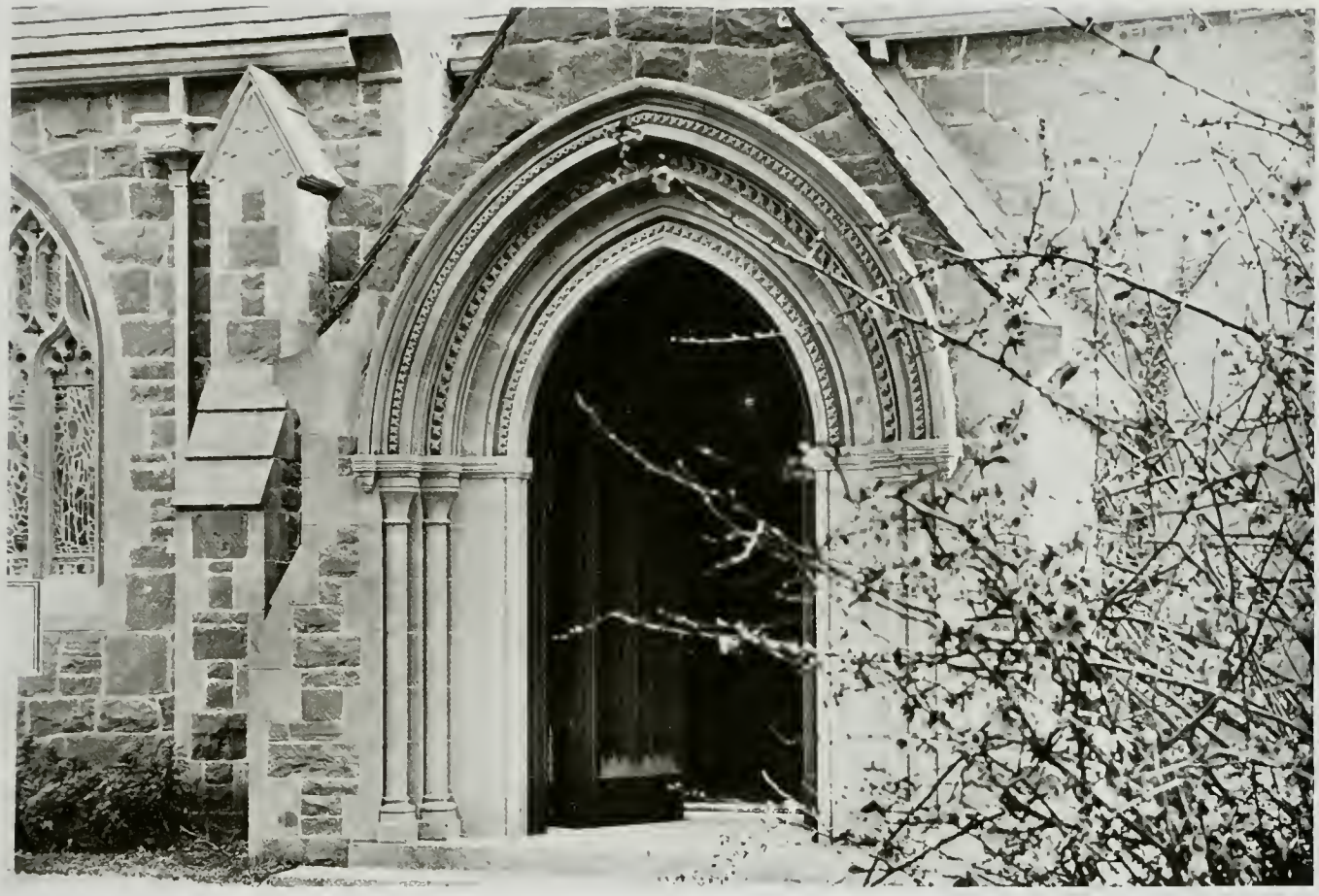
DRISCOLL APARTMENTS, SAN FRANCISCO
SYLVAIN SCHNAITTACHER ARCHITECT

CHURCH OF ST. MATTHEW, SAN MATEO, CAL.
WILLIS POLK & CO ARCHITECTS

DETAIL OF WINDOW

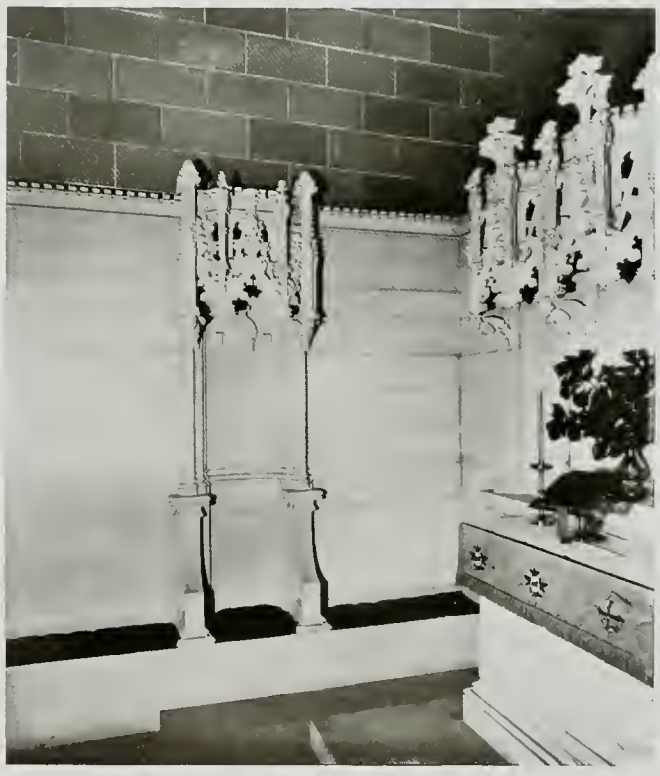
CHURCH OF ST. MATTHEW, SAN MATEO, CAL.

WILLIS POLK & CO., ARCHITECTS



DETAIL OF ENTRANCE

PULPIT



BISHOP'S SEAT

CHURCH OF ST. MATTHEW, SAN MATEO, CAL.

WILLIS POLK & CO ARCHITECTS

ALTAR IN TRANSCEPT

BAPTISMAL FONT

READING DESK

CHURCH OF ST. MATTHEW, SAN MATEO, CAL.
WILLIS POLK & CO. ARCHITECTS

The Gravity Method of Moving Merchandise.

EVERY merchant and manufacturer is keenly interested in cutting handling expense. A method, therefore, which, by making use of the force of gravity, the cheapest motive power in existence, practically eliminates the expense of moving goods from one floor to another, and at the same time speeds up their delivery to any given point should be carefully considered by all business establishments occupying buildings of two or more stories, and having packaged, boxed, bagged and barrelled merchandise to move in a downward course.

To meet the demand for such a method the Otis Elevator Company, of New York, has developed and brought to perfection the Gravity Spiral Conveyor, a transferring medium which in its simplest form consists of a spiral blade, built within a circular shaft, made up of steel plates so fitted together as to form a perfectly smooth surface on which goods of any size and description will glide swiftly and easily to the outlets.

Belt Conveyors receiving packages from outlets.

A great variety of types, each adapted to the usage for which it is intended, has been developed, but generally speaking they are divided into two classes, the open type and the closed type. The open conveyor is best suited to the handling of large, bulky material such as boxed and cased goods, wholesale and warehouse merchandise, factory products and the like. The inlets are located near the floor level so that the goods can be placed on the conveyor without being lifted, and the pitch of the blade is calculated with such accurate precision as to allow the packages to be carried downward rapidly, but in absolute safety to the outlets. Protecting steel sides confine the goods to the sliding surface in their descent.

The closed type is usually recommended for handling the smaller and more compact classes of merchandise, especially small packages of a miscellaneous character. In this type the blades are enclosed in a steel cylindrical shell which, among other advantages, precludes the possibility of strayed or stolen packages, an inconvenience which might occur in the handling of thousands of small packages on an open type conveyor.

Gravity spiral conveyors possess considerable flexibility in the arrangements possible. The closed type may have one, two or three, and in some cases even more, spiral blades, and inlets may be located at all floors or any desired floor, thus permitting the spirals to be used in a number of different ways to meet the requirements of the particular business for which it is intended.

In the open type one or two spirals may be used, and here again the different arrangements possible are dictated by the requirements of each particular case.

In the accompanying illustrations, figures 3 and 4 show a closed type conveyor in operation in a wholesale merchandise warehouse, figure 3 showing the baskets containing goods being placed in the inlet at one of the stock floors, and in figure 4 the baskets are being received in the packing room.

Figures 5 and 6 illustrate a large open type conveyor in the same establishment.

As an illustration of the possibilities of arrangement, figures 7 and 8 show a multi-spiral conveyor in a large clothing manufacturing establishment. This conveyor has six separate blades, serving all floors from the 13th to the shipping room in the basement.

The capacity of the gravity spiral conveyor is obviously enormous, and is limited only by the speed at which the packages can be carried away from the outlets. For this reason horizontal belt conveyors are often used, where miscellaneous small packages are handled in large quantities, for transferring the packages to the conveyor inlets and also for the subsequent distribution of the goods. Figures 1 and 2 clearly illustrate the use of the belt conveyor as a complement of the gravity conveyor.

Gravity spiral conveyors of both the open and closed types are furnished with a complete equipment of automatic fire doors. These fire doors are furnished in two designs, known as the vertical sliding and hinged types. The vertical sliding fire door, which is used at all side inlets of the closed types of conveyors and at the intersection of all floors of the open type, are counter-balanced in such a way that they will remain closed unless fastened. This fastening consists of a latch and fusible link which melts in case of fire. The counter-balance, thus liberated, allows the door to close and thus completely shuts off the conveyor from the fire. The hinged drop doors are usually arranged to cover the outlets of the closed conveyors, and the top inlets of both the open and closed types. These are counter-balanced and fastened with a chain and fusible link similar to the sliding doors.

Belt Conveyor delivering wrapped packages.

ELECTRIC TRACTION ELEVATORS

An electric elevator, basicly, consists of a car, a counterweight, hoisting cables, a motor which drives a sheave or drum about which the hoisting cables wind and an electro-magnet controller, which is actuated by a master switch in the car, and which regulates the starts, stops and speeds of the elevator.

The first electric elevators were confined entirely to the drum type of machine, that is, a machine with a grooved drum about which the hoisting cables are wound and which

Inlet to closed type conveyor at one of the stock floors.

Baskets being received in packing room.

Goods on open conveyor.

Outlet of large open type conveyor.

is driven through worm gearing by an electric motor. This type of machine was highly satisfactory until, with the advent of steel skeleton skyscraper construction, buildings were designed 200, 300, 500, and recently 600 and 700 feet high. For buildings of such heights the drum types of machines were found wholly inadequate not only because of the very large drum sizes necessary to accommodate the cables of these high rise elevators, but also because of the practical speed limitations of these types.

Accordingly, the traction principle of construction was adopted and developed, resulting in the geared and gearless traction types.

The Otis Electric Traction Elevator derives its name from the fact that motion is obtained by means of the traction existing between the driving sheave and the hoisting cables. In order to produce the necessary tension for this result, the hoisting cables, from one end of which is suspended the car and from the other end the counterweight, pass partially around the traction driving sheave in lieu of a drum, continuing around an idler leading sheave, thence again around the driving sheave, thereby forming a complete loop around these two sheaves.

The Gearless Traction Elevator is the logical result of the present-day tendency toward simple construction, economical operation and the highest possible degree of safety. No one who has ridden in one of these elevators has failed to appreciate that the machine which accomplishes what this one does so easily and smoothly, at the same time impressing the passenger with such a feeling of solidity and security, is the machine which the public has wanted and will want from now on.

In this type of elevator the working parts have been reduced to the fewest possible elements, but at the same time absolute safety and perfection of operation have been secured by the application of a sufficient number of highly ingenious devices and controlling features.

The machine itself consists essentially of a motor, a traction driving sheave and a magnetically released, spring applied brake, all compactly grouped and mounted on a continuous heavy iron bed. Instead of the high speed motor customarily used with the Geared Electric Elevator, a slow speed motor designed especially for the service is employed. These motors, due to their special design, have a remarkably high efficiency. The armature shaft which is of high tensile steel serves merely as a support for the load, and on it are mounted the brake pulley and driving sheave. The actual drive from the armature spider to the sheave is effected through a flange integral with the spider and bolted directly to the sheave, thus eliminating all torsional strains to the shaft, and the use of keys.

The Gearless Traction Elevator may be used for any rise whatsoever, since this invention does not have to consider a drum upon which the hoisting cables are wound. The direct drive and consequent elimination of all intermediate gearing between the motor and driving member results in a machine of very high efficiency, and absolutely prevents any possibility of vibration or noise. With the slow speed motor employed, the momentum is much less than with a smaller high speed motor, permitting of greater ease in starting and stopping, and resulting in a smooth and practically faultless movement of the car. Moreover, the compact and simple arrangement of parts effects the greatest simplicity of installation and economy of space.

The controller used with these elevators embodies the very latest application of electro-magnetic switches. It is actuated by a master switch in the car, and gives unexcelled starting, accelerating, retarding and stopping effects.

The controller is so designed in connection with the motor that the initial retardation of the car in coming to rest is independent of the brake, the latter being requisitioned to bring the car to a final and positive stop and to hold it at the landings.

The motor is also governed in such a way, electrically, as to prevent the car from attaining any excessive speed, no matter what the load in it may be.

In designing the controlling equipment, one of the features demanding greatest consideration, in view of the very high speed at which the cars run, is the automatic retarding of their speed to a final stop at the upper and lower terminals of travel. This result is very satisfactorily attained by a multi-arm switch located on the car. This switch is operated by cams in the hatchway that open the contacts, one after the other, as the car approaches the limits of travel. This automatic feature is entirely independent of the operator in the car.

THE ARCHITECT

VOL. XI. SAN FRANCISCO, APRIL, 1916 NO. 4

EDITORIAL.

THE Oregon Chapter, American Institute of Architects, has recently assisted in conducting a very satisfactory competition. While the Chapter agrees with the Institute that the choosing of an architect by selection is, in general, better than by competition, it feels that for public buildings, such as schools, city halls, court houses, etc., the competitive method is better for the taxpayer. In carrying out this idea, and trying to be of some public service, the Chapter has offered its services in a number of cases, one of which has just been brought to a successful conclusion.

The School District of Baker, Oregon, had voted $125,000 for a new High School, and in order to insure a fair competition the Chapter offered to furnish the services of a Professional Adviser and Jury, at its own expense. The offer was accepted, the School Board, however, insisting on paying the expenses of the Professional Adviser. As the result of a public invitation by the School Board, twenty-three architects submitted credentials, as required by the Professional Adviser and from the credentials passed on favorably by him the Board selected nine competitors. This selection was made by the Board in secret session, and without suggestion from the Professional Adviser. The Program was drawn in conformity with the provisions of the standard requirements of the American Institute of Architects, by the Professional Adviser, and was approved by the Institute local Subcommittee on Competitions. The Jury consisted of the State Superintendent of Public Instruction, and an architect selected by the School Board, and an architect selected by the competitors. At the close of the competition the drawings were considered by the Jury, meeting on two separate days, and the result was submitted to the School Board, which confirmed the choice of the Jury and selected as architects for the building Messrs. Ellis F. Lawrence and William G. Holford, of Portland, Oregon.

The School Board of Baker consists of O. P. Ison, Chairman; N. C. Haskell, W. S. Levens, W. H. Ellis, Ernest Welch and W. S. Bowers, Clerk. Mr. F. A. Naramore, A. A. I. A., of Portland, gave his services as Professional Adviser, as did the Jury, who were J. A. Churchill, Superintendent of Public Instruction of Oregon; Folger Johnson, architect, of Portland, and Carl F. Gould, A. A. I. A., of Seattle, Washington.

As evidence of the satisfaction the Board found in the competition, the following is a copy of a letter sent to the competitors:

"The Board of Directors of School District No. 5, Baker County, Oregon, is desirous of extending to you its thanks for your taking the time and trouble required in preparing plans for submission in our recent competition. The Board selected the names of nine competitors from among about twenty submitted, and was highly gratified with the high class of all of the plans entered in the competition."

CENTRAL FIGURE IN DOME CROWN
WISCONSIN STATE CAPITAL

THE CIVIC CENTER.

The Civic Center Improvement Club of San Francisco deserves considerable praise for its unselfish work and the stand that it has taken for the artistic integrity and development of the city. This organization publishes a weekly magazine for the sole purpose of furthering and inciting interest in civic improvement.

The club is devoting most of its attention in seeing that the Civic Center plan is carried out as originally planned. It advocates a city planning commission with authority as well as responsibility to make San Francisco the scenic wonder of the world; and urges that such a commission should direct and not merely advise in all that relates to city adornment. The hit-or-miss plan has proven a costly failure, so much so that every visiting connoisseur marvels at our unthinkable neglect of natural advantages. The cold truth is that the people of artistic taste have never had a say in the adornment affairs of the city, excepting, of course, in the case of the Civic Center.

Disorderly and inartistic development could easily occur in the Civic Center unless there is intelligent and independent authority to check bad taste and stimulate an artistic sense of proportion. At least, it is fair to assume from previous experiences in city adornment enterprise, that it could be badly disfigured.

The artistic success of the Panama-Pacific Exposition was not accidental. It was due to the fact that architects and art commissions were permitted to perform as they had planned. Authority and responsibility were happily coupled. Given a free hand, they were able to try effects and make required changes. To these trials, to the alterations in figures, medallions and other sculptural work we are indebted for the harmony that has astonished and delighted the world.

Pacific Coast Chapters, A. I. A.

"The Architect" is the official organ of the San Francisco Chapter of the American Institute of Architects.

San Francisco

The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held in the Italian Room of the St. Francis Hotel, on Thursday evening, March 16, 1916.

The meeting was called to order at 8:30 p. m. by the President, Mr. W. B. Faville. Seventy members and guests were present.

The reading of the minutes of the meeting held on February 17, 1916, was dispensed with.

The following communications were ordered read and placed on file:

From Mr. Flavel Shurtleff, Secretary of the National Conference on City Planning, enclosing copy of January Quarterly of the City Plan; from the American Federation of Arts, regarding the Seventh Annual Convention in Washington, D. C., May 17 to 19, 1916; from L. M. King, Secretary San Francisco Chamber of Commerce regarding appropriation for the Ocean Beach Esplanade; from Charles Peter Weeks, regarding the location of a Power Plant in Washington; from Hon. Julius Kahn, relative to the construction of a building for the Department of Justice; from Senator John I. Nolan, referring to the same matter; from Burt L. Fenner, Secretary of the A. I. A., relative to protests of members against H. R. bill No. 743.

The Chair stated that this was the first of a series of three meetings of the Chapter to be devoted to City Planning, and that at this meeting the Chapter would have the pleasure of hearing the opinions of the City Attorney, City Engineer, Superintendent of Parks and Boulevards, President of the Board of Education, and Mr. Joseph Leonard, all of whom were particularly qualified to discuss the problems of San Francisco from a City Planning standpoint. The next meeting would be devoted to a consideration of the Oakland and San Francisco Water Fronts, and members of the San Francisco Harbor Commission and the Oakland Board, would be invited to discuss the matter. The final meeting would be devoted to a consideration of the Burnham Plan for San Francisco, and a general resume of the matters discussed at the previous meetings.

Honorable Percy V. Long, City Attorney, was then introduced, and was listened to with great attention. Mr. Long discussed some of the problems of City Planning, particularly calling attention to the fact that San Francisco should profit by the experience that New York was having, by reason of a failure to establish restricted zones for the conduct of certain lines of business.

The next speaker was Mr. A. J. Cleary, Assistant Engineer, who spoke on what the City Engineer's Office was doing to promote a definite plan for the future growth of San Francisco.

Dr. A. D'Ancona, President of the Board of Education, spoke on the matter of providing adequate school house and playground facilities and their proper location.

Mr. John McLaren, Superintendent of Golden Gate Park, gave an outline of the Boulevard System of San Francisco, and laid stress on the necessity of providing Park areas in various sections of the city.

Mr. Joseph Leonard told of some of his experiences in laying out a restricted residence park, and the lack of proper lines of communication between various parts of our city. He also made the point that the questions at issue were not questions really of City Planning, but of re-planning a city.

The appreciation of the Chapter was voted to all the speakers.

HOME OF E. C. YOUNG, FOREST HILL, SAN FRANCISCO
BERNARD R. MAYBECK, ARCHITECT

On motion, the Secretary was directed to send a letter to the Finance Committee of the Board of Supervisors, endorsing an appropriation out of the next tax levy for the second section of the Ocean Beach Esplanade. It was also moved, seconded and carried, that the Chapter send a letter of appreciation to Senators Newlands and Phelan, for their stand in supporting the work of the Fine Arts Commission in the City of Washington.

There being no further business before the Chapter, the meeting adjourned at 11:10 p. m.

* * *

Oregon Chapter

Meeting at The Hazelwood, Thursday noon, February 17, 1916, called to order by President Holford. The Secretary not being present, Mr. Beckwith was appointed temporary Secretary by the Chair.

Members present: Messrs. Williams, Lazarus, Holford, Rich, Fouilhoux, Naramore, Smith, Beckwith, Doyle, Thompson, and Hogue.

Minutes of the previous meeting approved as printed.

Reports of Committees — Legislative Committee: No report. Publicity Committee: No report. Educational Committee: Members' attention called to the meetings being held every Friday night at the East Side Library. Entertainment Committee: No report. Competition Committee: Baker High School competition drawings being judged today and tomorrow, by Mr. Folger Johnson, Mr. Carl Gould, of Seattle, and Mr. Churchill, of Salem. The program of the Baker School competition was approved by the Competition Committee of the Chapter and of the Institute. The competition was advertised by the Baker School Board, and was brought to the attention of the members of the Chapter by typewritten copies of the advertisement mailed to each member by the Chapter, and to the attention of other competitors thru the publication of the advertisement in the newspapers by the School Board. The credentials of twenty-three applicants were passed on by Mr. Naramore, as Professional Adviser, and from these the School Board selected nine competitors, three of whom were members of the Chapter. The selections made by the Board were in secret session and without advice or suggestion from the Professional Adviser. The jury was composed of J. A. Churchill, State Superintendent of Public Instruction, and Folger Johnson, Architect, these two selected by the School Board, and Carl F. Gould, Architect, of Seattle, selected by the competitors. The competition closed February 14, and the selection of the jury was the plans submitted by Messrs. Lawrence and Holford, this selection being confirmed by the School Board.

The Competition Committee met J. A. Churchill, State Superintendent of Public Instruction, in regard to a competition for Rural Schools, and it was determined to hold a competition for a one, two, and four-room school building. Mr. Churchill offers a sum of money for prizes which will probably be divided into three prizes of $35, $30 and $25. The competition will be unlimited, but will consist of as few and simple drawings, in pencil, as possible. The program will be announced soon and will probably call for plan and elevations of the one-room school and suggestion sketches for the application of the same or a similar design to the larger schools.

Mr. Hogue told about Mr. Churchill's conversation with him

You Architects Have Great Responsibilities

You are held directly responsible for every part of the work.

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It isn't a question of whether or not you are legally responsible for the failure of any fixture to do its work satisfactorily.

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Your only recourse is to the manufacturer. If he fails to realize the importance of your position—if he refuses to replace the unsatisfactory fixture—or only does so after a long-drawn-out investigation, your client becomes dissatisfied. The possibility of future work becomes small.

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regarding the Chapter's holding a competition for small rural school buildings. Mr. Doyle made a motion that the Chapter conduct this competition thru its Competition Committee, and that this Committee be given the power to act wih Mr. Churchill in arranging necessary details; seconded by Mr. Rich; motion carried.

Mention was made that the Roseburg School Board intended building a High School in the near future. Mr. Naramore made a motion that the Competition Committee take up the matter of a competition with the Roseburg School Board; seconded by Mr. Thompson, motion carried. Mr. Williams introduced an amendment to this motion "that if a competition is held thru the Chapter that this competition be open to all the Architects of the State." This amendment was allowed to stand as a part of the minutes on request of Mr. Williams.

Municipal Plans and Affairs: Mr. Johnson, not being present, Mr. Naramore spoke of the good work done by this committee in assisting with the selection of the Jefferson Statue to be placed in front of the present Jefferson High School. Mr. Doyle made a motion that a record be made of this in the minutes; seconded by Mr. Fouilhoux; motion carried.

Professional Practice: No report.

Communications: Letter from "House Beautiful" regarding house competition; referred to Competition Committee. Letter from the Institute regarding the new application for membership. Motion by Mr. Doyle that a copy of this notice be sent to all members; seconded by Mr. Beckwith; motion carried.

New Business: Motion by Mr. Hogue that Mr. Gould and Mr. Churchill, judges of the Baker Competition, be tendered a luncheon or dinner Friday, February 18th; seconded by Mr. Smith; motion carried. No further business. Meeting adjourned.

* * *

Washington Chapter

The Chapter met at the Architectural Club Rooms, 203 14th Avenue North, at 6:30 p. m., February 14, 1916, with President Loveless in the chair, and the following members present: Loveless, Sexsmith, Cote, Huntington, Alden, Parks, Schack, Noldenhour, Gould, Willcox, Richardson, Field, Everett, Willatzen, Baeder, Josenhans, Storey.

After dining at the Club Rooms, the meeting was called to order, and the minutes of the previous meeting were read and approved.

A communication was read from the Building Material Dealers' Credit Association (664-5 Empire Building), extending an invitation to this Chapter "to secure from us any information at any time that is within our means to give, and which may be of assistance to you in handling your business." After a lengthy discussion, in which several of the members took part, it was moved and seconded that the President communicate with this organization, and obtain fuller information, and report his findings at the next Chapter meeting.

A letter was read from Mr. E. C. Kemper, Executive Secretary of the Institute, regarding a series of lectures to be given by Mr. Frank B. Williams, of the City Club, N. Y., on the City Planning of the United States. The Secretary was instructed to write Mr. Williams, asking for further particulars regarding subject matter, price, etc.

The Chairman of the committee appointed to draft a letter to the Bellingham School Board reported that they had submitted a draft of same to Mr. Josenhans. Mr. Josenhans reported that he had retained the draft through a misunderstanding. A motion to reconsider the original motion was made and carried. After a lively discussion among the members, a motion was made and carried that the original committee send a copy of the letter they proposed to send to the School Board of Bellingham, to the Architect of the building, Mr. Doane, giving him the opportunity to reply, before sending the letter to the School Board.

Mr. Willcox then spoke in a very interesting manner about the proceedings of the Board of Directors of the Institute, at their recent meeting in Washington. Mr. Willcox explained in detail the action of the Board relative to the expenses of delegates to the Annual Convention, showing that the Chapters which are farthest removed from the Convention City will receive the largest sums toward their expenses, and that hereafter there would be no valid excuse for a lack of representation from these distant bodies. He also spoke of a scheme which the Board of Directors had under consideration, and which was being formulated to arrange for a measure of publicity for the Institute whereby the Institute might possibly stand sponsor to a series of plans for small houses which would be available all over the United States, and would be under the control of the Chapters. Mr. Willcox also referred to the influence which the Institute had on the Government architecture, citing the instance of the new building for the Department of the Interior, which was planned to be faced with brick, and which, owing to the efforts of the Institute, and the pressure exerted by the various Chapters, was changed to a stone-faced building.

TYPICAL BOULEVARD, FOREST HILL, SAN FRANCISCO
MARK DANIELS, ENGINEER

The name of Mr. Gerald Castle Field was placed before the members for advancement from Junior to Regular membership, and after a regular ballot, Mr. Field was declared to be unanimously elected.

A telegram from the President of the Institute to the President of this Chapter was read, asking our President to wire Congress at once protesting against the erection on the Mall, at the foot of the Washington Monument, of a power house with four large smokestacks; this, President Loveless immediately did, and he then received a second telegram asking for a reply to Congress from those familiar with the City of Washington; this the Chapter ordered sent, and the President was delegated to see that same was done.

Mr. Sexsmith stated that there was a possibility that the Course of Architecture at the University of Washington at Seattle, might be taken to the State College at Pullman, and eliminated from the Course here. He, therefore, desired that the Chapter go on record with a resolution stating that they would deem Seattle the logical place for such a course to be held. After considerable discussion, it was voted that the Committee of Education, with two additional members appointed by the President, formulate such a motion. Later the President appointed Mr. Alden and Mr. Cote on this committee. The motion also included the President and Secretary to act with the committee in this matter. In reply to a question from the President, Mr. Gould expressed his readiness to devote an evening to the outlining of the work which was being done at the University, both as regards the Architectural Course and the new scheme for the buildings.

Mr. Gould brought up the matter of a bill introduced in Congress to place all the National Park Employes under Civil Service. The matter was referred to the Legislative Committee to report to the Council as soon as possible, and the Council was given the power to act in the matter.

The Secretary read an extract from an unknown source entitled "A Professional Doctrine." This was ordered copied, and a copy to be sent to each member. The meeting then adjourned at 10:30 p. m.

Early Stucco Houses

We have gathered into a rather fine monograph, some charming examples of early stucco houses in America. The warm, mellowed tones of this old stucco, with its pleasing surface-inequalities, following the unevenness of the stone base, are a fund of available precedent little drawn upon, as yet, for modern work.

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Southern California

The ninety-fourth meeting of the Southern California Chapter was held at the Bristol Cafe on Tuesday, March 14, 1916. The meeting was called to order at 7:45 p. m. by President S. Tilden Norton. The following members were present: D. C. Allison, J. E. Allison, J. J. Backus, S. O. Clements, F. P. Davis, W. J. Dodd, P. A. Eisen, W. E. Erkes, Lyman Farwell, R. C. Farrell, P. H. Frohman, I. J. Gill, J. C. Hillman, F. D. Hudson, A. C. Martin, S. B. Marston, Octavius Morgan, O. W. Morgan, S. T. Norton, Robert H. Orr, H. M. Patterson, A. F. Rosenheim, F. L. Stiff, J. T. Vawter, August Wackerbarth, A. R. Walker, H. F. Withey. As guests of the Chapter were present: Mr. George Wharton James; W. E. Prine, of the "Southwest Contractor"; and John Bowler and W. Dellamore, of the "Builder and Contractor."

The minutes of the ninety-third meeting of members were read and approved. Following the reading of the minutes, the order of business was set aside in order to permit Mr. George Wharton James to address the Chapter. At the conclusion of Mr. James' most excellent talk, Mr. Octavius Morgan moved a unanimous vote of thanks to the speaker. This resolution was carried.

For the Board of Directors the Secretary reported that a membership application was received by the Board from Mr. Alfred W. Rea, and the Secretary was instructed to take the matter up further with Mr. Rea and send out the usual letter ballots. The Board unanimously accepted the resignation of Mr. George A. Howard.

For the Committee on Resolutions on the death of Fernand Parmentier, Mr. Martin reported that a memorial had been sent to the family and a copy to the "Institute Journal." Mr. Octavius Morgan, a member of the Board of Directors of the Institute, delivered to the Secretary the Certificate of Fellowship of Mr. Fernand Parmentier.

Communications were next read as follows: From Senator James D. Phelan relative to the construction of a building for the Department of Justice. From Mr. Burt L. Fenner, Secretary of the American Institute of Architects, relative to the protest registered by Chapters in the matter of a new building for the Department of Justice and reciting that the Institute's purpose in making such a protest had been accomplished. From E. C. Kemper, Executive Secretary, A. I. A., notifying this Chapter that the heretofore unassigned territory of Arizona had been assigned to the Southern California Chapter. From the San Francisco Chapter, A. I. A., extending their sympathies in this Chapter's loss of its valued Secretary, Fernand Parmentier. From Mr. Burt L. Fenner, Secretary, A. I. A., notifying this Chapter that Mr. D. W. Willard, of Redlands, and Mr. Alfred W. Rea, of Los Angeles, Members-at-Large, had been assigned as members to this Chapter. From the Washington Chapter, A. I. A., requesting an exchange of copies of the minutes. The matter was referred to the Secretary. From Mr. Edward V. Engle, stating his inability to have a listing of Mr. Parmentier's books and other office equipment ready for the Chapter's March meeting.

The meeting adjourned at 11 o'clock.

A. R. WALKER,
Secretary pro tem.

Current Notes

In the advertising pages of the March issue of "The Architect," under an illustration of the Oakland Auditorium, Oakland, Cal., we inadvertently gave architectural credit to Palmer & Hornbostle, architects, J. J. Donovan, supervising architect. This should have read J. J. Donovan, architect, and Henry Hornbostle, consulting architect.

* * * * *

The San Joaquin Valley Association of Architects was recently organized at Stockton, Cal. The promotion of a better feeling of co-operation, and the raising of professional standards, are the objects of the organization. The association will not confine its membership to architects alone, but engineers, designers, architects and others of allied professions, will be entitled to membership. It is planned to hold meetings of special interest to all engaged in architectural work once a month, and to be featured by addresses by well-known men. Officers were elected as follows: Joseph Losekann, president; L. S. Stone, vice-president; Frank V. Mayo, secretary-treasurer.

* * * * *

The Boston Varnish Company announces that it has been compelled to materially advance the price of Kyanize white enamel. This factory is turning out the highest grade of material possible to manufacture, and is one of the few concerns which has the courage to advance selling prices rather than cut quality. The company advises architects to beware of cheap enamels under the present conditions. Genuine French zinc is the only material from which a reliable enamel can be made, and this commodity is practically unobtainable at any price at the present time.

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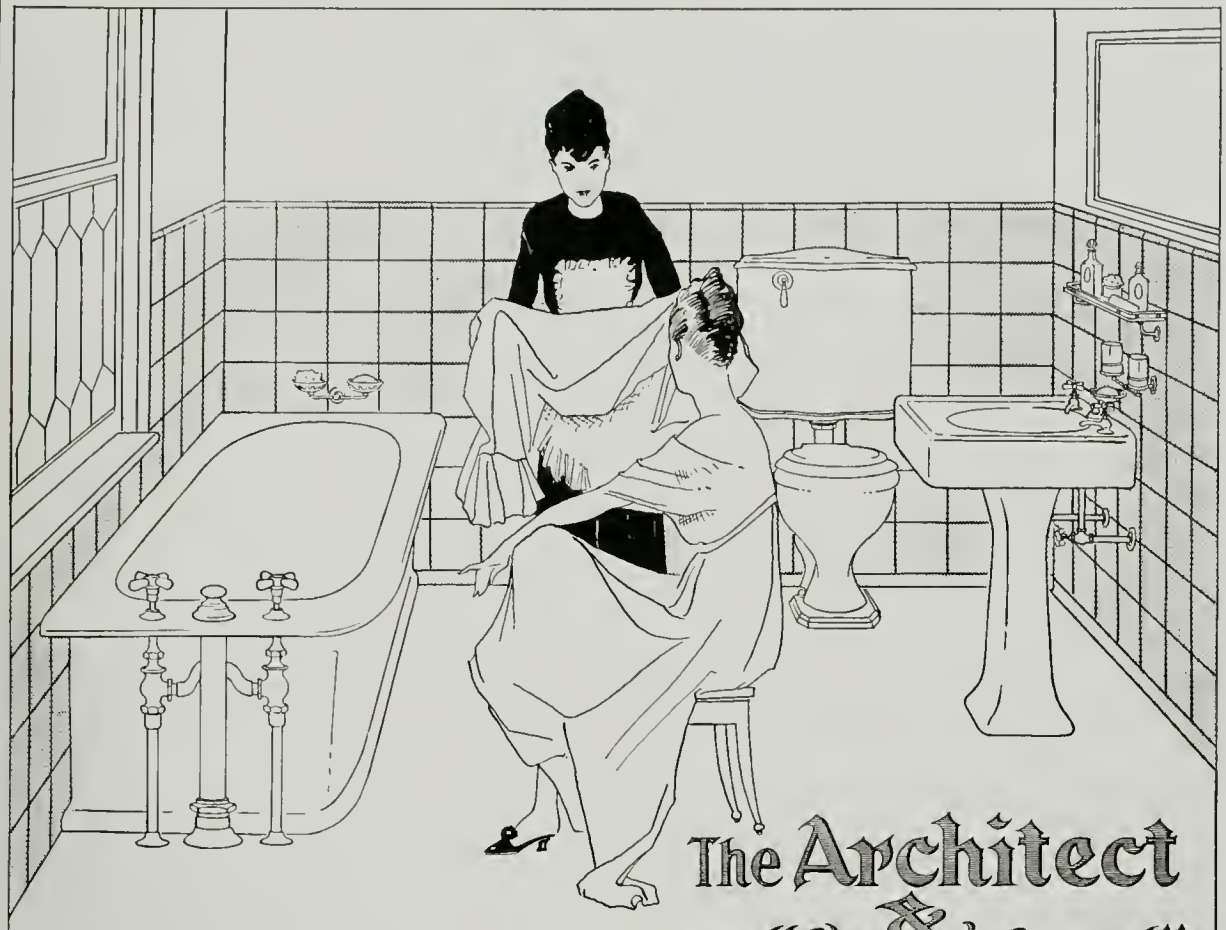

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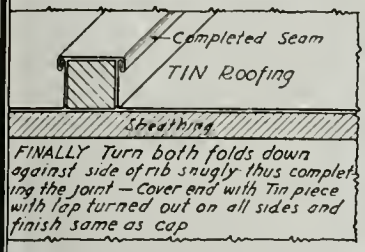
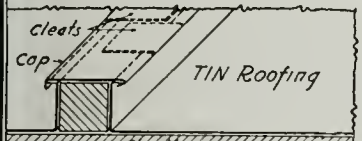
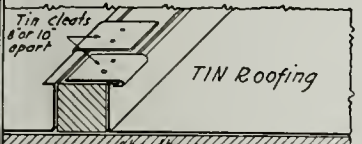


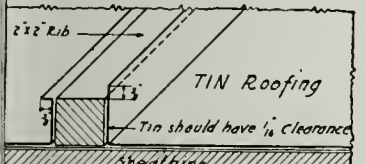
FINALLY Turn both folds down against side of rib snugly thus completing the joint — Cover end with Tin piece with lap turned out on all sides and finish same as cap



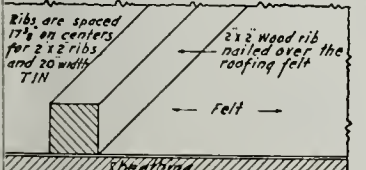
NEXT - Cap is cut 3¾" wide allowing ⅜" on each side to turn - One side is turned as far as possible - the other turned square Hook the sharp turned edge to tin then press the other side down and fold under



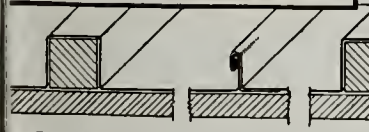
THEN - Tin cleats, one for either side are locked over the lap and then nailed securely to the top of the ribs
These cleats are usually spaced 8" or 10" apart along the entire length of Rib.



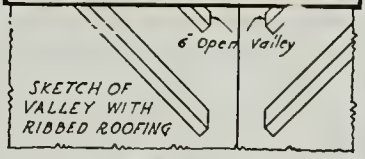
NEXT - The tin is applied to the roof between the ribs - using either sheet or rolled TIN and turned up to stand ⅜" above the height of rib. The ⅜" is then turned out and is ready to receive the cap.



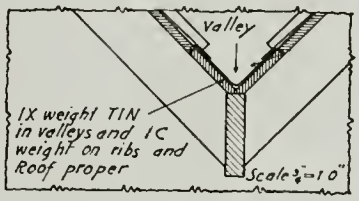
FIRST - Cover sheathing with a good quality building Felt or "Waterproof paper free from Tar or Acids - Then nail the wood ribs of desired size over the felt. Sheathing is laid in opposite direction to ribs

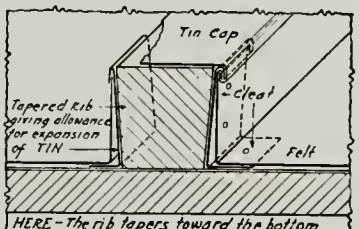


DETAILS SHOWING COMBINATION OF RIB & STANDING SEAM
SCALE 6"=1'-0"

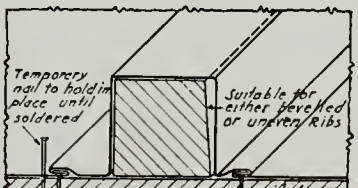


SKETCH OF VALLEY WITH RIBBED ROOFING

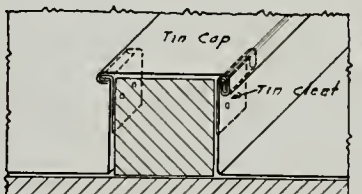




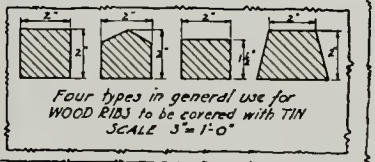
HERE - The rib tapers toward the bottom giving ample allowance for the expansion of the TIN.
The cleats are fit snugly to the taper and are nailed to both the Rib and the sheathing.



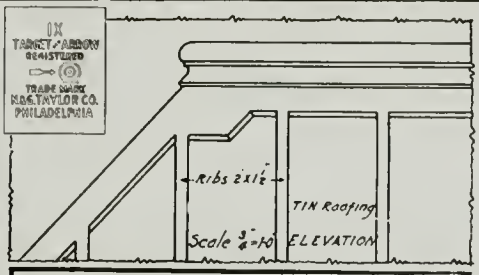
Method particularly adapted to BEVEL or IRREGULAR RIBS
Here the cap is held on by regular Flat seams on each side of the RIB
Scale 6"=1'-0"

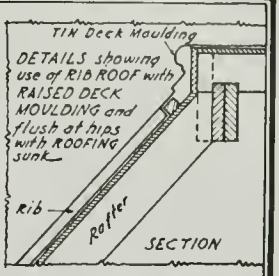


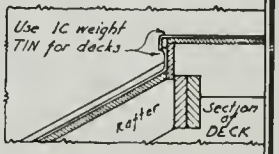
Method where similar cap is used, the cleats being fastened to the sides of the Rib instead of the top
Scale 6"=1'-0"

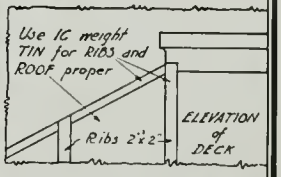


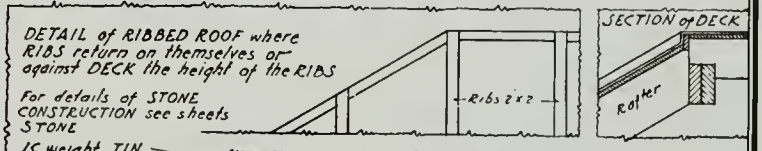
Four types in general use for WOOD RIBS to be covered with TIN
SCALE 3"=1'-0"

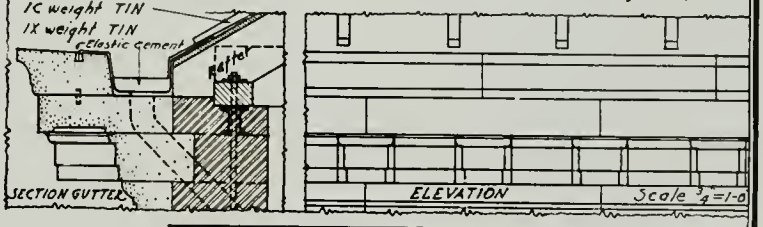


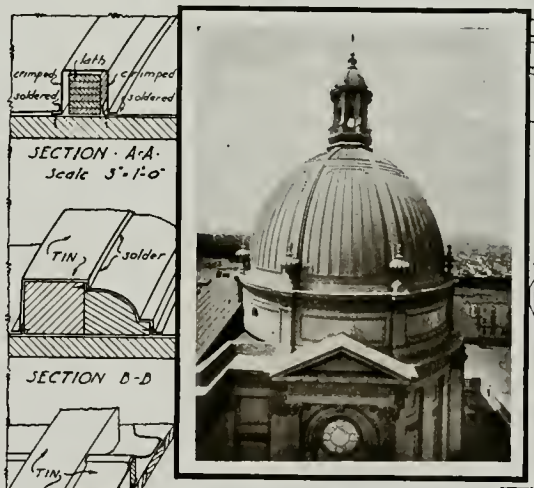

TIN Deck Moulding
DETAILS showing use of RIB ROOF with RAISED DECK MOULDING and flush at ribs with ROOFING sunk
Rib
Rafter
SECTION

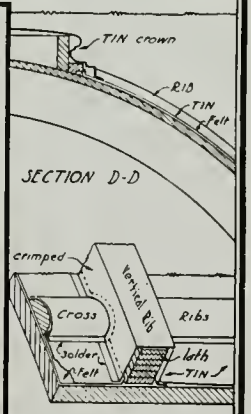





DETAIL of RIBBED ROOF where RIBS return on themselves or against DECK the height of the RIBS
For details of STONE CONSTRUCTION see sheets STONE
Ribs 2"x2"
SECTION of DECK
Rafter



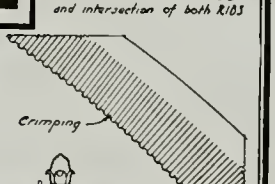




Sketch showing TIN JOINTS on horizontal RIB and intersection of both RIBS

DOME covered with TIN, RIBBED

ELEVATION of RIB on the right shows CRIMPING of TIN on the sides of RIB RIBS of DOME may be made TAPERING in width from BASE to CROWN if desired



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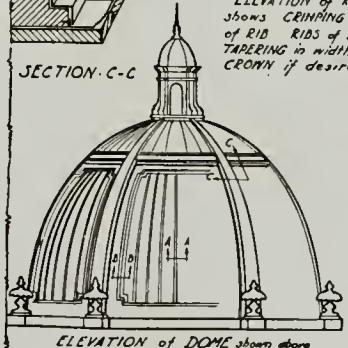
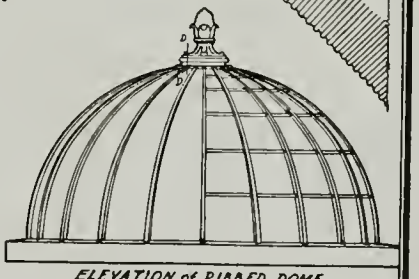


ELEVATION of DOME shown above

Showing adaptability of TIN RIBBED ROOFING to ornamental Designs.



ELEVATION of RIBBED DOME

One half showing VERTICAL RIBS - One half showing VERTICAL and HORIZONTAL RIBS

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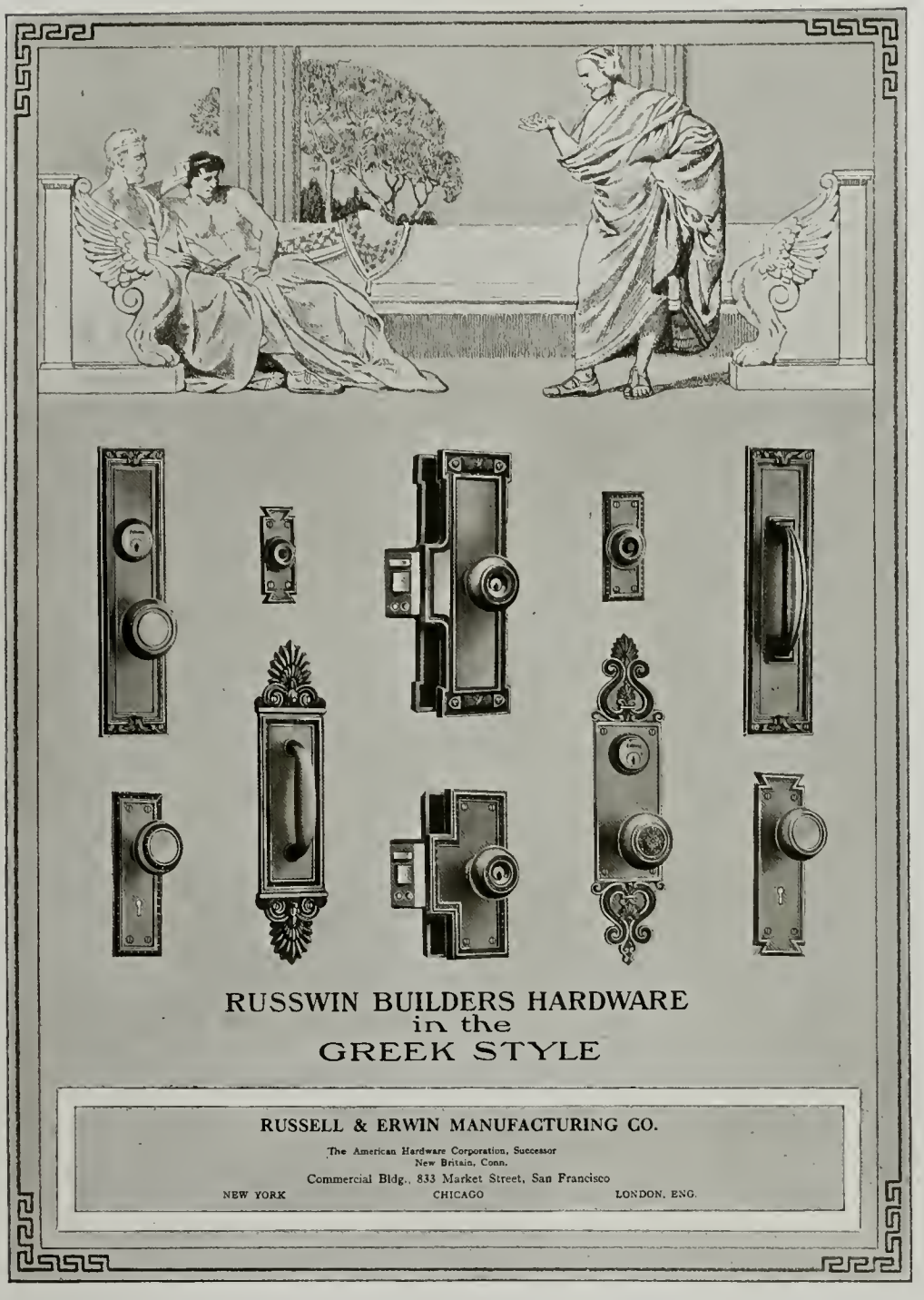

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MAY · 1916

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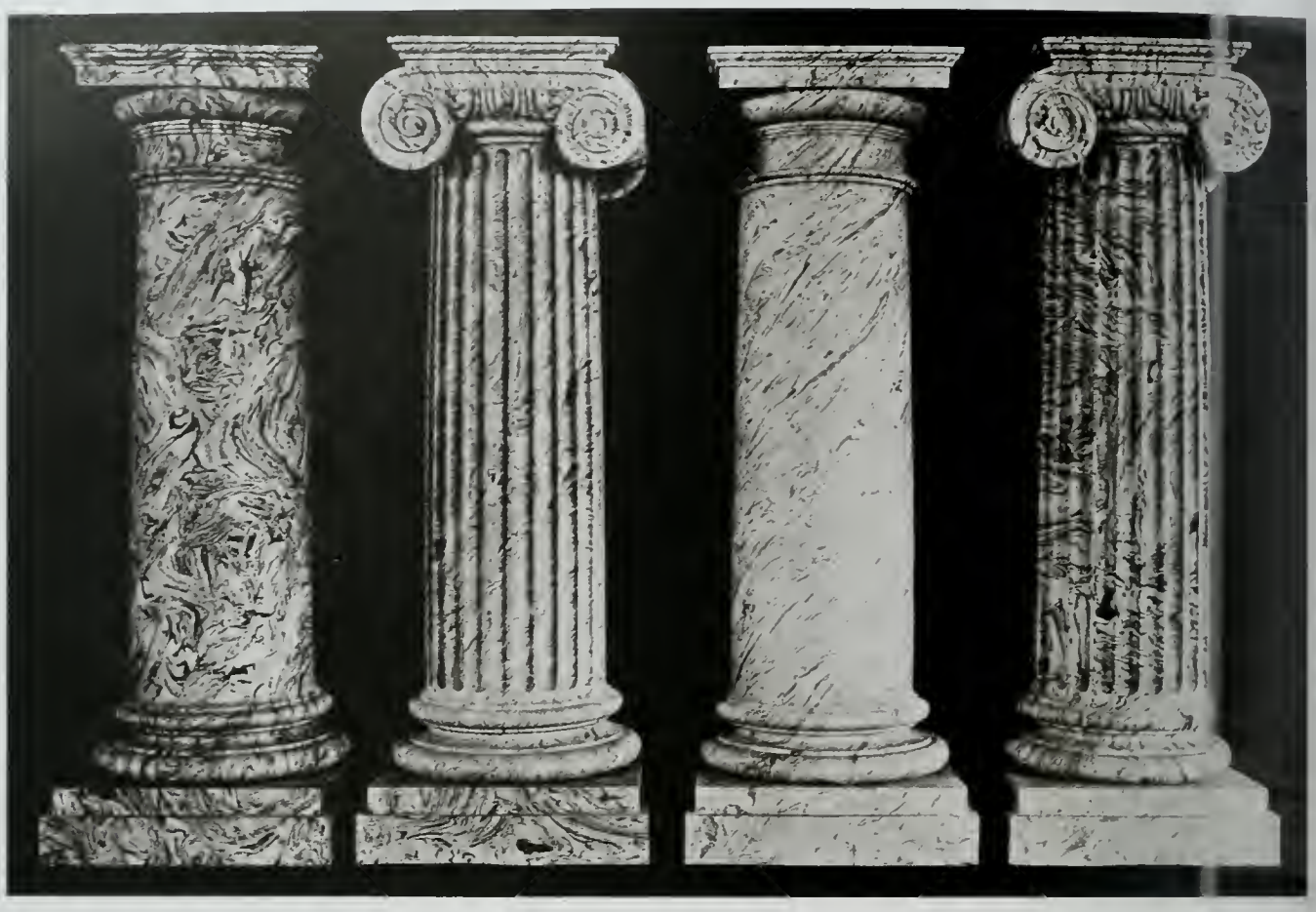

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Vol. XI. No. 5

THE ARCHITECT

J A DRUMMOND Publisher CLARENCE P KANE. Editor

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¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated. E. D. McDonald, Northwest Representative, 4100 Arcade Building, Seattle, Washington.

Photo by Francis Bruguiere

DETAIL

HOME OF LOUIS SARONI. SAN FRANCISCO

KENNETH MacDONALD, JR., ARCHITECT

THE ARCHITECT

VOL. XI. SAN FRANCISCO, MAY, 1916 NO. 5

An Architect's Home.

BY A. B. WASTELL

CUSTOMARILY we hie to the suburbs when searching for type in architecture, giving little thought, in our rush and bustle, to the charming dwellings that abide here and there, even in the somewhat congested residential districts of San Francisco, often cosily tucked in between apartments of formal mien.

The personal interest attending a pleasant call at the distinctive home of our architect friend, D. J. Patterson, recently, gained his permission to reproduce some of its features for THE ARCHITECT.

Situated upon the ridge of Buena Vista Heights, the dividing line between two old Spanish grants, appropriately named Divisadero Street, the bracing climb to the Patterson home (built before the great fire) is well rewarded by the view. Overlooking the great area of roofs, one gets the vista of hill-encircled San Francisco Bay, glistening like an opalescent jewel, with far-away glimpses of five counties—San Francisco, San Mateo, Alameda, Contra Costa and Marin—how fortunate that the Spanish nomenclature harmonizes with the beauty it designates! Mounting the artificial stone steps, between the red brick copings, topped with Belgian bay ornamental trees in terra cotta jardinieres, brings one to the brick basement coated with white cement stucco, above which siding and roof are wooden shingles showing natural weathered effect. The basement entrance is surmounted by a copper and glass marquee with chain supports and iron braces, door and window grills are of Renaissance detail, while the window above has a balcony of redwood supported on redwood brackets. The sash curtains on this window and that above the doorway are of architectural design. The entrance hall is finished in California redwood, leading up into the first-floor stair hall paneled in Douglas fir. The adjoining reception room carries a green color scheme in wall hangings, upholstering and carpet, with redwood trim and mantel of redwood stained mahogany very effectively. Many articles of virtu adorn this room, the sculpture IVY on onyx pedestal, the Thad Welch over the mantel, the Louis XV. lamp shade, while several bits of color by Patterson lend added joy. The dining room is paneled in genezero, has beamed ceiling and oak floor. The fireplace tiling of terra cotta extends up to the plate rail with a recess for bric-a-brac. The lighting fixtures are all after special Patterson *patterns*, and radiate warmth and glow that suggest ideal hospitality. Now for rest and quiet we will go upstairs to the living room, pausing in the upper hall to gain inspiration from a large mural showing life-sized allegorical figures groping their way to the TEMPLE OF KNOWLEDGE, which again suggests an architectural significance. Around the

ENTRANCE DETAIL
HOME OF D. J. PATTERSON, SAN FRANCISCO
D J PATTERSON, ARCHITECT

INTERIOR VIEWS

HOME OF D. J. PATTERSON, SAN FRANCISCO

D. J. PATTERSON, ARCHITECT

living room extends a frieze panorama by Duncan, carrying relaxation in its breadth of vision, and back to the range suggestion, while the soft tones of the redwood trim and book cases create the atmosphere of a real living room. In this familiar visit we will now seek the oasis, at the rear of the house, which must be a joy to the dwellers in neighboring apartments, where a formal garden is laid out in all sorts of geometric designs, with vines trailing in profusion over lattice and pergola, with here an arbor guarded by two newels of stone and there a shrine to Bacchus, who grins at you as you approach the columned portal. The impression following our good-byes was that in this dwelling one directing mind had guided each choice, from the first drawing through every stage of construction, furnishing and the outdoor setting; that the most had been made of every feature, whereas, in many instances, the charm of fine homes is lost through lack of thought with reference to interior finish and furnishings.

VIEW IN FORMAL GARDEN
HOME OF D. J. PATTERSON, SAN FRANCISCO
D J PATTERSON, ARCHITECT

How frequently the architect completes his commission in turning over the finished house, when further counsel from him is so desirable to make of the building a real home. As the creator of the shell, the architect knows requirements to decorate and beautify it, while the owner frequently experiments into atrocious combinations. Whenever possible, the architect's commission should include decorations and furnishings with the hope that the harmony of the complete HOME may insure harmony of relation in the life of the family that shall later occupy it.

The elaborate homes built for the personal occupancy of well-to-do clients, do not usually involve such an incongruous outcome, as the factors that create this situation are, unwarranted haste to get settled in the new establishment in order to cut off the expense of maintaining temporary quarters during the construction period, or to the overwhelming desire or necessity, according to temperament or condition of pocketbook, to either perpetuate in use some family heirlooms or to utilize the "things from the old home, which are really too good to throw away." The hurry in the first instance, resolves into snap judgment, instead of deliberate choice after careful consideration of harmony with the tone of the interior finish and of the purpose and character of each room individually and the personality of its expected occupant as well as to the inter-relation of each suite of rooms. The utilitarian motive in the second instance, may be commendable in this day of prevailing waste, from an economic standpoint, but the resulting pot pourri is little short of a crime, and such home atmosphere frequently produces discord, both apparent and real. Another contributing factor to the "out-of-harmony" home, is the practice of building homes in job lots, to sell. Payments and terms, bonds on street work and interest, are the big problems of the installment buyer. Too often there is no fund available for the purchase of appropriate furniture, so the householder "moves in," piecing out the old things with nondescript purchases from time to time, but never attaining the homey charm that in other circumstances perfectly simple furnishings, consistently selected, make of any house a home. Can you recall, in recent years, the suggestion referring to some intimate, that his home looks like him? Such a home of the past seemed to take on personality, though simply built of wood; it had a setting that gave it charm; it had been built to suit the family, and often it represented in some part the handiwork of each member of the family. This gave it character. Houses run in moulds and furnished without regard for their mission and without due thought for harmony in expression, cannot compare in effectiveness as real places to live in, with the "personally conducted" homes in which every detail from original hand sketch to final finishing touches in furnishing has been lovingly considered by the same mind before being executed. In this busy age, when each one is crowded to his limit to carry on his regular duties, how may this personal element be enlisted? It is the conviction of the writer that the answer is in the extension of the architect's supervision.

HOME OF D. J. PATTERSON, SAN FRANCISCO
D. J PATTERSON, ARCHITECT

General Conditions of the Contract.

BY FRANCIS W. GRANT

The third of a series of articles discussing the code adopted by the American Institute of Architects

ARTICLE 17. PROTECTION OF WORK AND PROPERTY. The Contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Owner's and adjacent property from injury arising in connection with this Contract. He shall make good any such damage or injury, except such as may be directly due to errors in the contract documents."

Since the contractor can always be held for damage and must turn over the structure in an undamaged condition, there is no need of a clause on this subject except for the purpose of reminding and warning him, and such clauses will best serve their purpose when specifically directed toward certain anticipated derelictions such as failure to box stone projections or cover green masonry during inclement weather. Even admitting the propriety of so general a clause as submitted, there is room for great improvement in the language. If it be required that the contractor shall make good all damages of certain described kinds to certain named persons and interests, it is then superfluous to say that he shall maintain adequate protection against such damage occurring.

"*Article 18. EMERGENCIES. In an emergency affecting the safety of life or of the structure or of adjoining property, not considered by the Contractor as within the provisions of Article 17, then the Contractor, without special instruction or authorization from the Architect or Owner, is hereby permitted to act, at his discretion, to prevent such threatened loss or injury and he shall so act, without appeal, if so instructed or authorized. Any compensation claimed to be due to him therefor shall be determined under Articles 10 and 45 regardless of the limitations in Article 25 and in the second paragraph of Article 24.*"

To fully understand this clause, it is made necessary to read two preceding paragraphs and three succeeding paragraphs. Brevity secured at the expense of clarity should be avoided.

The term "hereby permitted" should never be used in a building contract. If the case will not justify a mandatory provision, it does not properly become a contract provision and should be ignored.

"*Article 19. DAMAGE TO PERSONS. In addition to the liability imposed by law upon the Contractor on account of bodily injury or death suffered through the Contractor's negligence, which liability is not impaired or otherwise affected hereby, the Contractor hereby assumes, in cases not embraced within such legal liability, the obligation to save the owner harmless and indemnify him from every expense, liability or payment (voluntary payments excepted), by reason of any injury to any person or persons, including death, suffered through any act or omission of the Contractor or any Sub-contractor, or any one directly or indirectly employed by either of them, in the prosecution of any work included in this contract.*"

To make the contractor liable for damages regardless of the law on the subject is not fair, and to oust the courts of their jurisdiction is unconstitutional.

"*Article 20. LIABILITY INSURANCE. The Contractor shall maintain such insurance as will protect him from claims under workmen's compensation acts and from any other*

A LIVING ROOM WITH WARM-COLORED WALLS AND FURNITURE OF PLEASANTLY COMMINGLED STYLES

claims for damages for personal injury, including death, which may arise from operations under this contract. Certificates of such insurance shall be filed with the Owner, if he so require, and shall be subject to his approval for adequacy of protection. The Owner shall be responsible for his own contingent liability."

This clause may be entirely proper in some States. It does not fit the workmen's compensation acts of all States, however, and therefore is not proper for general use, hence of course inappropriate in this code.

"Article 21. FIRE INSURANCE. The Owner shall effect and maintain fire insurance upon the entire structure on which the work of this contract is to be done and upon all materials, tools and appliances in or adjacent thereto and intended for use thereon, to at least eighty per cent of the insurable value thereof. The loss, if any, is to be made adjustable with and payable to the Owner as Trustee for whom it may concern.

"All policies shall be open to inspection by the Contractor. If the Owner fails to show them on request or if he fails to effect or maintain insurance as above, the Contractor may insure his own interest and charge the cost thereof to the Owner. If the Contractor is damaged by failure of the Owner to maintain such insurance, he may recover under Article 39.

"If required in writing by any party in interest, the Owner as Trustee shall, upon the occurrence of loss, give bond for the proper performance of his duties. He shall deposit any money received from insurance in an account separate from all his other funds and he shall distribute it in accordance with such agreement as the parties in interest may reach, or under an award of arbitrators appointed, one by the Owner, another by joint action of the other parties in interest, all other procedure being in accordance with Article 45. If after loss no special agreement is made, replacement of injured work shall be ordered under Article 24.

"The Trustee shall have power to adjust and settle any loss with the insurers unless one of the contractors interested shall object in writing within three working days of the occurrence of loss, and thereupon arbitrators shall be chosen as above. The Trustee shall in that case make settlement with the insurers in accordance with the directions of such arbitrators, who shall also, if distribution by arbitration is required, direct such distribution."

After elimination of cross references to other articles and rewriting so that it is complete in itself and able to stand alone, this clause is excellent for use on contracts for alterations and repairs and contracts for parts of buildings, but it is entirely improper in case of an entire contract for a new building the responsibility for loss on which by fire or other casualty is entirely and always the contractor's and never the owner's.

"Article 22. GUARANTY BONDS. The Owner shall have the right to require the Contractor to give bond covering the faithful performance of the contract and the payment of all obligations arising thereunder, in such form as the Owner may prescribe and with such sureties as he may approve. If such bond is required by instructions given previous to the receipt of bids, the premium shall be paid by the Contractor; if subsequent thereto, it shall be paid by the Owner."

For "ready made" specifications intended to serve all the work of an architect's office, this clause would seem well adapted, but for "made to order" specifications intended to fit one certain building, it should be rewritten so as to be mandatory and explicit.

CHARMING BIT OF GARDEN SEEN FROM PERGOLA

"Article 23. CASH ALLOWANCE. The Contractor shall include in the contract price all allowances named in the Contract Documents and shall cause the work so covered to be done by such Contractors and for such sums as the Architect may direct, the contract sum being adjusted in conformity therewith. The Contractor, in making up his bid, shall add such sums for expenses and profit on account of cash allowances as he deems proper, and no demand for expenses or profit other than those included in the contract sum shall be allowed. The Contractor shall not be required to employ for any such work a Subcontractor against whom he has a reasonable objection."

The provisions in this paragraph dictating what the contractor shall do in making up his bid are amateurish. The contractor was not the contractor when he made up his bid and it was nobody's business but his own how he, as bidder, made up his bid.

"Article 24. CHANGES IN THE WORK. The Owner, without invalidating the contract, may make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change."

"Except as provided in Articles 9 and 18, no change shall be made unless in pursuance of a written order from the Owner signed or countersigned by the Architect and no claim for an addition to the contract sum shall be valid unless so ordered.

"The value of any such change shall be determined in one or more of the following ways:

"(a) By Estimate and Acceptance in a lump sum.

"(b) By Unit Prices named in the contract or subsequently agreed upon.

"(c) By Cost and Percentage or by Cost and a fixed fee.

"(d) If none of the above methods is agreed upon, the Contractor, provided he receive an order in writing signed by the Owner and countersigned by the Architect, shall proceed with the work, no appeal to arbitration being allowed from such order to proceed.

"In cases (c) and (d) the Contractor shall keep and present in such form as the Architect may direct, a correct account of the net cost of labor and materials, together with vouchers. In any case, the Architect shall certify to the amount, including a reasonable profit, due to the Contractor. Pending final determination of value, payments on account of changes shall be made on the Architect's certificate."

This clause, probably the most important of all the General Conditions, is not in form suitable for use. Five different methods of fixing the amount to be added or deducted for changes are too many in any contract. Methods (a) and (c) should each be inclusive of method (b). Method (b) is impracticable alone in every instance.

The provision that, pending final determination of "force account" extras, payment on account of same shall be made on the architect's certificates, might imply that, under some circumstances, payments might be made without an architect's certificate and it might also be taken as a mandatory provision that PARTIAL payments must be made on all such extras some time. The clause as a whole is inappropriate for submission as a model.

"Article 25. CLAIMS FOR EXTRAS. If the Contractor claims that any instructions, by drawings or otherwise, involve extra cost under this contract, he shall give the Architect written notice thereof before proceeding to execute the work, and, in any event, within two weeks of receiving such instructions, and the procedure shall then be as provided in the last paragraph of Article 24. No such claim shall be valid unless so made."

This is distinctly a part of the subject sought to be covered by Article 24 and should be included in it. The cross reference to the last paragraph of Article 24 is evidently an error and is an instance tending to prove the impropriety of depending on cross references to complete the meaning of any clause.

"Article 26. APPLICATIONS FOR PAYMENTS. The Contractor shall submit to the Architect an application for each payment and, if required, receipts or other vouchers from Sub-contractors showing his payments to them for materials and labor as required by Article 44."

(To be continued.)

LIVING ROOM FIREPLACE
BY ERI H. RICHARDSON

CONCORDIA CLUB, SAN FRANCISCO
G. ALBERT LANSBURGH, ARCHITECT

Photo by Gabriel Moulin

AUDITORIUM

CARD ROOM

Photos by Gabriel Moulin

CONCORDIA CLUB, SAN FRANCISCO

G. ALBERT LANSBURGH, ARCHITECT

SWIMMING POOL

SWIMMING POOL

Photos by Gabriel Moulin

CONCORDIA CLUB, SAN FRANCISCO

G ALBERT LANSBURGH ARCHITECT

BILLIARD ROOM

TURKISH BATH AND MASSAGE ROOM
CONCORDIA CLUB, SAN FRANCISCO
G ALBERT LANSBURGH, ARCHITECT

Photos by Gabriel Moulin

HOME OF LOUIS SARONI, SAN FRANCISCO
KENNETH MacDONALD JR., ARCHITECT

Photo by Francis Bruguiere

DETAIL

Photo by Francis Bruguiere

HOME OF LOUIS SARONI, SAN FRANCISCO

KENNETH MacDONALD, JR ARCHITECT

DETAIL

Photo by Francis Bruguiere

HOME OF LOUIS SARONI, SAN FRANCISCO

KENNETH MacDONALD, ARCHITECT

HOME OF EDWARD BRANDENSTEIN, SAN FRANCISCO
HERMANN BARTH, ARCHITECT

HOME OF EMIL GREENEBAUM, SAN FRANCISCO
HERMANN BARTH, ARCHITECT

HOME OF DR. MARTIN KROTOSZYNER, SAN FRANCISCO
HERMANN BARTH ARCHITECT

HOME OF MRS. M. A. HUNTINGTON, SAN FRANCISCO
HERMANN BARTH, ARCHITECT

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C W DICKEY, ARCHITECT

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C. W DICKEY, ARCHITECT

HOME OF MRS. S. T. ALEXANDER, PIEDMONT, CAL.
C. W. DICKEY, ARCHITECT

HOME OF JOHN F. HUMBURG, PIEDMONT, CAL.
C. W. DICKEY, ARCHITECT

HOME OF JOHN JACOBS, MERION, PA.
D KNICKERBACKER BOYD, ARCHITECT

LA GRANJA APARTMENTS, SAN FRANCISCO

FALCH & KNOLL, ARCHITECTS

THE ARCHITECT

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EDITORIAL.

THAT the work of an architect does not end when a building is completed is a recognized fact. That his work properly includes the completion of interior furnishings and decorations, is becoming more apparent each year. However broad the latter field, it can be classed as an essential part of an architect's service.

Architects will do well to appreciate the fact that the art of design and decoration, while perhaps in common with the principle of their profession, nevertheless requires a special and technical knowledge. This knowledge must be acquired before the first step can be taken in interior decoration. He must understand how to apply his art in genuine manner so that it will appeal consciously to those who understand it and unconsciously to those not initiated into its mysteries.

Probably the chief reason for an architect's interest in interior decoration lies in the fact that he does not desire to leave the completion of his work in the hands of untrained persons. On the other hand, he very often undertakes such work at the direct solicitation of a client.

It is well, also, to remember that a knowledge of decorative arts has, as a natural sequence, the broadening of an architect's field. A common practice is for an architect to work in co-operation with the interior decorator. Very often he makes suggestions, but is forced to rely upon the decorator for the proper execution of the work, which practically amounts to a complete assignment of the job to the decorator.

The architect, through limitation of his specific knowledge of the functions of decorative materials, must depend upon another person's ideas. It is often possible that the decorator's ideas are not in accord with the general scheme of adornment as conceived by the architect. Therefore, a conflict of decorative ideas as represented by the architecture of a building and the interior furnishings, is not unlikely.

The study of furnishings and the arts decorative is occupying ever-increasing attention by the architects of this country. Not alone the monetary benefit, but the satisfaction gained from creating a work completed in every sense in exact accord with one's ideas is sufficient incentive to create a deeper appreciation and desire for knowledge along these lines.

* * * * *

What promises to become an annual event of decided interest and importance was the joint meeting of the Washington State Chapter of the American Institute of Architects and the Seattle Master Builders' Association, held in Seattle the latter part of April. The dominant keynote of the gathering was the expressed desire of all present for a more co-operative endeavor based upon knowledge of the true functions of each profession. Such meetings are of greatest value to both architects and contractors. They serve to bring about a better understanding and operate for an elimination of the manifold conflicts and disturbances that at times arise, through this very lack of understanding.

Architect Charles H. Bebb, of Seattle, a chief speaker of the evening, voiced an appeal for an expression in architecture and building of a high intelligence so that the monumental works that stand for the future may express a national spirit of this day. Mr. Bebb frankly criticised the spirit of building as the expression of a great commercialism, often stamped as a money-making investment.

In amplification, Mr. Bebb said that the master builder of past ages was but the guiding hand of the spirit of the people inscribing itself in those books we call building. The architect, master builder, mechanic and workman labored with a single purpose, the perfection of the work in hand. In contrast, he pointed to the spirit of building today, with a very few isolated exceptions, notably the Woolworth Building of New York City.

Mr. Bebb landed hard on some of our city beautifiers when he said that the idea of the city beautiful or even practical appeals as but a chimera in the mind of the dreamer and the impractical exponent of civic betterment.

"We architects and master builders are doing better work today."

Living Room Fireplace, by Enri H. Richardson. Colors, mulberry brown and dull blue. Hearth in brown quarry tile. Butchelder tile insert.

Earliest Oxford.

BY ADELAIDE CURTIS

THE beginnings of this famous city have been much disputed, and they still remain a mystery. Although lying in one of the earliest settled portions of the country, the Romans finding the district inhabited by the Dobuni, an ancient British tribe, while here and there cromlechs and scattered stones still testify to a prehistoric period, Oxford's earliest records are nevertheless unknown. Legends are abundant, but the real history of Oxenaford, or Oxenford (a ford for oxen [?]), as it is earliest written, must, like the meaning of the very name itself, be hidden from us. The town, however, was a most important one throughout the period before the Norman Conquest, probably growing up in the first place around the nunnery of St. Frideswide (or Frithswyth), and extending from "the slope leading from the ford near Folly Bridge to Carfax." Only legends connect the early city with the name of King Alfred, although coins of his time have been found bearing the word "Oksnaforda," indicating the establishment of a mint in the early city.

The first historical mention of Oxford is in 912 A. D. "But when Oxford does at last appear, it appears as one of the most important towns in England, a town fairly on a level with Exeter, Lincoln, and Norwich. In the first entry where the name is mentioned, Oxford is coupled with London; these are the two great cities which King Eadward takes into his hands on the death of Ealdorman Aethelred to secure the obedience of the Mercian realm. In the new division and new nomenclature of central England, it became the head of a shire, and it is not without reason that Henry of Huntingdon seems to wonder that it had never become the seat of a bishopric. We hear of it, as of other places, as destroyed and rising again in the Danish wars, and during the greater part of the eleventh century it appears as the chosen place for holding the most important national assemblies. It was not indeed, as Westminster, Winchester, and Gloucester became at a somewhat later time, one of the fixed places where the King held his court and wore his crown at the three great festivals of the Church; but the times when Oxford is spoken of as the seat of great national councils point to it as possessing a practical importance which set it in some sort above places of higher formal dignity. When a meeting was designed to be specially national, when some solemn act was to be gone through which affected Northern and Southern England alike, Oxford was the place which was commonly chosen. Its position on the great border stream of Wessex and Mercia made it admirably suited for such a purpose."

William the Conqueror made his coming felt in Oxford, and "few towns in England suffered more, whether through a capture by storm, or oppression of William's officers." With the arrival of the Normans, Oxford's importance is again plainly shown, the Domesday survey of the city being "more than usually complete." The priory church of St. Frideswide, and the churches of St. Mary the Virgin, St. Michael, St. Peter-in-the-East and St. Ebbe are here mentioned. "From other sources it is known that St. Martin's at Carfax was in existence, and not less than seven more before the close of the century." The story of these early churches is deeply interesting, illustrating too, as it does, valuable and unique Saxon and Norman work. St. Martin's is one of the most ancient foundations, having been built, it is said, by King Canute in 1032. The old church was twice reconstructed, nothing being left to the present time, however, but a picturesque tower dating from the fourteenth century. St. Peter's-in-the-East has a Norman tower and crypt dating from 1074, while the chain ornament (as symbolic of St. Peter in Vincula [?]) of the chancel vaulting is most unusual. The

Old Norman Tower, St. Michael's Church, Oxford

church of St. Mary the Virgin, in the very center of the city, has also been the center of its life since its earliest establishment. Its bells once summoned the students in the often most serious "Town and Gown" disputes; here in this church Cranmer was tried for heresy; here Amy Robsart was buried; while here in later times John Wesley and Keble preached some of their most remarkable sermons. St. Michael's is a church most interesting for both historical and architectural reasons. Its rugged tower of the Saxon type of construction, although built in earliest Norman times, contrasts most picturesquely with the beautiful Gothic buildings of the colleges, erected some centuries later. St. Michael's low, square tower originally formed a part of the very walls of the city, its neighbor (no longer standing) just across the street being the Bocardo, an ancient prison, and connected with St. Michael's by a short bridge. Near this Church is pointed out the interesting monument on the site of the martyrdom of Cranmer and his fellow-reformers.

The Cathedral of Oxford is the smallest in England. The present size is due to the fact that Cardinal Wolsey demolished the west front and three bays of the nave. The edifice of today stands on the site of an early church, erected in the eighth century by Didan, king of Mercia and father of St. Frideswide. Her shrine, much restored, stands in the east end of the cathedral, while a small arch and a part of the eastern wall of the cathedral are pointed out as belonging to King Didan's original building. The nave of the cathedral is an interesting example of Norman work.

Another fine memorial of the earliest Norman period is the Castle of Oxford, of which a stern and lofty tower and the crypt of an ancient chapel within the walls still remain. Upon a high mound, constructed for defense during the Saxon period, was built this castle, the work of one of William the Conqueror's followers, Robert D'Oigli, d'Oily, Olgi or Ouilly — Professor Freeman tells us of half a dozen various spellings of the name. This man of such uncertain cognomen, in spite of early oppressions, especially in plundering the Abbey of Abingdon, some few miles distant, nevertheless became in his later life one of the Church's benefactors, making some reparations at Abingdon, and building or repairing some of the parish churches of Oxford. The Primitive Romanesque work of Oxford Castle corresponds to that of the tower of St. Michael's church, while St. Peter's-in-the-East is said to be an example of one of D'Oigli's buildings. It is interesting to note in this connection that, during the terrible wars of Stephen and Matilda, the latter fled for protection, and received it, in that same Abbey of Abingdon, which had been so hardly used a century earlier.

Many other fine specimens of mediæval architecture still stand in Oxford, aside from the University buildings; of the city walls themselves, "large portions remain, and the circuit can be traced throughout." Splendid fragments of these walls and of an ancient city gateway can be seen in the charming gardens of New College, their ivy-covered ruins adding much to the picturesqueness of this early foundation, so much of whose original architecture fortunately still exists. Just outside the north walls of the city, Beaumont Palace was built by Henry I., this becoming a favorite royal residence, and the birthplace of Richard I. and John. The splendidly preserved Norman church of the village of Iffley, less than five miles distant from Oxford, is "one of the finest specimens of early ecclesiastical architecture in England," while in the city of Oxford the oldest private house, a delightfully quaint little thirteenth-century structure, brings much pleasure to the antiquarian.

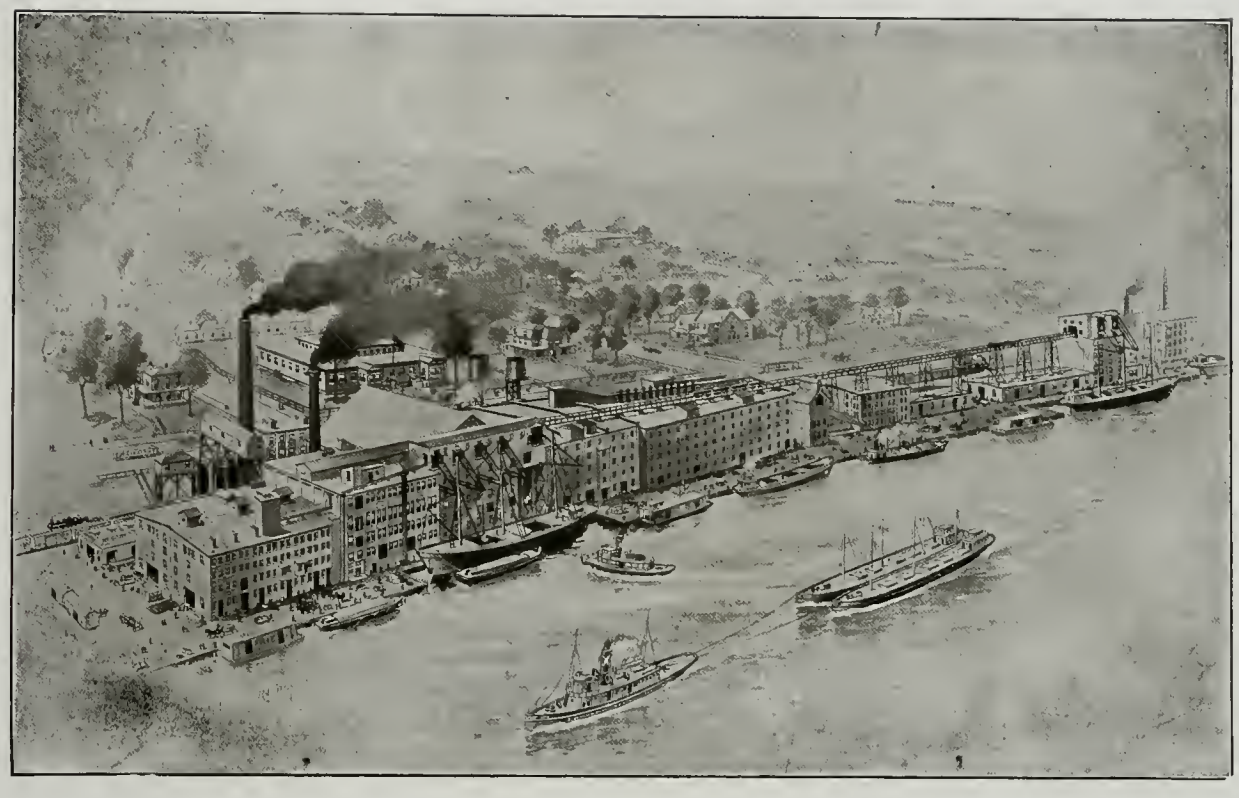
Jonah's Window, Christ Church Cathedral, Oxford

Professor Freeman in his scholarly essays, "Preacademic Cambridge" and "Preacademic Oxford," points out the differences and the likenesses between the two university towns. "Cambridge, with its distinct Roman traces, has the advantage of antiquity; Oxford has the advantage of earlier and more constant historic importance. The academic Cambridge planted itself on ground of its own, and has made the old borough into a kind of suburb."

AN EFFECTIVE PIECE OF ENGINEERING IN DESIGN OF STREETS, FOREST HILL SAN FRANCISCO

MARK DANIELS, ENGINEER

Current Notes and Comment.



Main Office and Works, the Muralo Company, New Brighton, N. Y.

MOST of those associated with the paint and allied trades are more or less familiar with the large plant of the Muralo Company, who for over a quarter of a century have been manufacturers of sanitary wall coatings and cement paints, the quality of which has set the standard not only in the United States, but in all parts of the world as well.

It was about twenty-five years ago that the Muralo Company first started business at New Brighton in a primitive way, making its wall coatings with two or three small mills and shipping little quantities of its products to various parts of the world as trial orders; the soil upon which these products fell must indeed have been fertile, for root for future development was promptly taken, with the result that the trade of the Muralo Company has now grown to be over thirty million pounds per annum. Thirty million pounds of any product is a large quantity to be made in a year, and the output of the Muralo Company is used to decorate and beautify homes in all parts of the world.

The Muralo Company's factory covers a floor space of 840,280 square feet, and besides the hundreds of men employed throughout the works, the company have their own printing plant, where millions of pieces of artistic advertising matter are prepared; they have their own lighters, their own tug boats, their own barges, the plant being situated between the tracks of the B. & O. Railroad and New York Bay makes it possible for shiploads of chalk to come direct from the coasts of France and England and unload at their works. The company also own large gypsum mines in Nova Scotia, and in their own barges transport gypsum from Windsor to New Brighton. This concern is today the largest manufacturer of wall coatings in the world.

The Muralo Company have their main office and works at New Brighton, and have branches, under the supervision of local managers, at Chicago, Ill.; San Francisco, Cal.; Buffalo, N. Y.; Richmond, Va.; Boston, Mass., and in New York City. To meet the convenience of their Pacific Coast trade, they maintain an office and warehouse at 311 California Street, San Francisco, where complete stocks of their various products are carried on hand. Mr. A. L. Greene is the local manager.

A selling force travels from the local branches covering the respective territories, and their goods are handled by practically all the paint and hardware dealers throughout the country.

Hugh Walter Pearson is the managing director of the company and is well known in the paint trade; the other officers of the company are G. R. King, president; E. D. King, vice-president, and H. F. Hutchinson, treasurer.

Well-known local brands of the Muralo Company are Dutch Kalsomine, Concreto Cement Coating, Cal-o-Tint, Master Painters' Wall Size, Kalresco, Rex Flat Wall Paint.

The advertising department issues a great many beautiful color scheme booklets suggestive for home decorations, which they are pleased to furnish interested architects.

* * * * *

The nature of architectural books constituting the library of an architect often makes their cost high. This is primarily due to the demand that these books be illustrated in the most profuse and complete manner.

The present stage in the development of photography and printing has made possible the production of many valuable works dealing with this subject. It is possible that the architect is offered a more comprehensive and finely illustrated number of books directly relating to his profession than any other profession or line of business activity. This may be traced to the abundance of good photographic material. Very often these books are compiled almost exclusively of photographs, with the barest amount of descriptive text possible.

There should be a tendency on the part of the architect to use care in selecting only the best. While it is true that the cost of many of these books comes high, the direct inspiration which may result from a perusal of their pages easily compensates for their first cost.

Pacific Coast Chapters, A. I. A.

"The Architect" is the official organ of the San Francisco Chapter of the American Institute of Architects.

Minutes of San Francisco Chapter.

The regular monthly meeting of the San Francisco Chapter of the American Institute of Architects was held in the Italian Room of the St. Francis Hotel on Thursday evening, April 27, 1916. The meeting was called to order at 8:30 by the President, Mr. W. B. Faville.

The speakers of the evening and members of the Engineers' Club were present as guests of the Chapter.

MINUTES

The reading of the minutes of March 16, 1916, was dispensed with.

COMMUNICATIONS

The following communications were ordered read and placed on file and were referred to the Board of Directors for action:

Partial report from the Committee on Contractors' Affairs, from Mr. G. Alexander Wright, chairman; from Mr. George B. Ford, chairman of the Town Planning Committee of the Institute, and editorial from the New York *Times* referring to the power plant in Washington, D. C.; from Clinton B. Ripley, of Honolulu, regarding his application for Institute membership; from B. F. W. Russell, enclosing Bulletin of the Boston Society of Architects.

The Chair stated that this was the second of a series of three meetings of the Chapter to be devoted to city planning and that at this meeting the Chapter would have the pleasure of hearing the matter of harbor development discussed by Lieutenant-Colonel Thomas H. Rees, U. S. A., who would take up the question with the consideration of the east shore of San Francisco Bay, while Hon. J. J. Dwyer, President of the State Harbor Commission, would discuss the development of the San Francisco water front.

Colonel Rees was then introduced and spoke very interestingly on what was being done in order to give the east side of San Francisco Bay proper harbor facilities. He was followed by Mr. Dwyer, who showed what was being done on the San Francisco water front and spoke of what the future development would be. His talk was illustrated by lantern slides and was listened to with great interest. He also referred to the necessity of providing means for relieving the congestion at the foot of Market Street and suggested that by adding and widening streets, much of the present congestion could be substantially relieved.

The thanks of the Chapter were voted to both the speakers.

STANDING COMMITTEES

There were no committee reports with the exception of the following:

Board of Directors. Mr. Faville stated that forty-six applications for Institute membership had been received and forwarded to the Institute at Washington and favorable action on the applications was anticipated.

Committee on Relations with Contractors' Affairs. A written report was received from this committee, which was referred to the Board of Directors.

Competition Committee. Mr. Mooser for this committee reported concerning the Merced High School Competition that the first program as issued by the High School Board had been disapproved and that after a visit of a committee from the Chapter to Merced, the trustees had agreed to make the program accord with the requirements of the Institute, and that in that form the program had been approved. This accounted for the fact that the members had received the three notices, the first notice of disapproval and the second of approval. Then after the form of the program had been approved, the trustees had seen fit to insert a clause guaranteeing the cost of the building, and as this was contrary to the understanding had with the Board and also the requirements of the Code, it was decided that the competition should be again disapproved and the membership of the Chapter were notified accordingly.

ADJOURNMENT

There being no further business before the Chapter, the meeting adjourned at 10:30 p. m.

Subject to approval, ... 1916.

SYLVAIN SCHNAITTACHER,
Secretary.

Minutes of Southern California Chapter.

The ninety-fifth meeting of the Chapter was held at the Bristol Cafe, on Tuesday, April 11, 1916.

The meeting was called to order at 7:50 p. m. by President S. Tilden Norton. The following members were present: J. E. Allison, John C. Austin, J. J. Backus, S. O. Clements, F. P. Davis, P. A. Eisen, Lyman Farwell, R. C. Farrell, Irving J. Gill, John C. Hillman, A. C. Martin, S. T. Norton, Robt. H. Orr, T. F. Power, A. F. Rosenheim, F. L. Stiff, August Wackerbarth, A. R. Walker, H. F. Withey.

As guests of the Chapter were present: W. E. Prine, of the *Southwest Contractor;* John Bowler and W. Dellamore, of the *Builder and Contractor.*

The minutes of the ninety-fourth meeting were read and approved.

For the Board of Directors, the Secretary reported a meeting held on March 31st, at which meeting the Secretary was authorized to send a copy of the proposed By-Law Amendment to all Institute members.

For the A. I. A. Sub-Committee on Competitions, Mr. J. E. Allison read a telegram relative to the Merced High School Competition.

For the Committee on Ethics and Practice, Mr. P. A. Eisen reported on a meeting held by the Master Builders of Los Angeles, at which he and Mr. J. C. Austin were present.

Communications were read as follows:

From the Master Builders' Association of Los Angeles explaining to the Chapter about the existence of their Association and with the further object of correcting any misunderstanding that might occur due to a confusion of name with that of an organization known as the Master Builders of Los Angeles.

A communication was read from the Master Builders of Los Angeles, together with a resolution adopted by said organization. After the reading of these two communications, a resolution was unanimously adopted that the Chapter render a vote of confidence in the organization and the work being done by the Master Builders' Association of Los Angeles; that we commend the limitation of their membership to those who are refraining from attempting an architectural service and that this Chapter holds itself in readiness to cooperate with them in every way possible.

Further resolution was adopted that the communication of the Master Builders of Los Angeles be referred back to the proper committee for reply.

Communication was read from the San Francisco Chapter, I. A. A., advising that the competition for the Merced High School did not conform to the Circular of Advice on Competitions.

From Mr. B. F. W. Russell relative to a matter of Institute Public Information. This communication was referred to the Committee on Public Information.

From the Los Angeles *Examiner,* two communications relative to an alleged fraudulent statement of circulation on the part of a local newspaper and requesting resolutions condemning such practice. This matter was referred to the Board for reply.

From Octavius Morgan, expressing regret that the State Board of Architects would be unable to attend the April Chapter meeting.

From the Los Angeles *Examiner,* relative to the establishing of an Architects' Directory in the new building section of the Los Angeles *Daily Examiner.*

A resolution made by Mr. Martin, duly seconded, was adopted that the Secretary communicate with Mr. Ihmsen, editor of the paper, stating that the Chapter desired to co-operate in every reasonable way possible, but that the Chapter would be unable to take part in any work that might be classified as advertising.

Under the head of unfinished business, the amendment to Article 1, Section 7, of the By-Laws regulating the method of election to honorary membership was unanimously adopted.

A letter was next read from the Board of Public Works expressing a desire to obtain information as to the advisability of granting an amendment to the city building ordinance covering the kind of wire which may be used in spiral reinforcement of concrete columns. The Chapter voted to endorse a substitute amendment to overcome the difficulty, which was to be framed by Mr. A. C. Martin, Mr. J. J. Backus, and the Secretary.

A call was next rendered on the Chapter members relative to the sale of books belonging to the late Fernand Parmentier.

On the conclusion of the business, Mr. J. C. Hillman gave a most interesting talk on a recent transcontinental motor camping trip. This talk was most entertaining and was greatly enjoyed by all present. Upon its conclusion, a vote of thanks was rendered to Mr. Hillman.

The meeting adjourned at 10:35 p. m.

A. R. WALKER,
Secretary Pro Tem.

COPY OF AMENDMENT

"Honorary members shall consist of persons who have retired from the practice of architecture, or who have rendered valuable service to the profession, or Institute members of other Chapters of the American Institute of Architects. A person may be proposed for honorary membership by written recommendation signed by three members and presented to the Board of Directors. Upon approval of the recommendation the Board shall present the same at the following meeting of the Chapter and a four-fifths vote of the members present shall elect such person."

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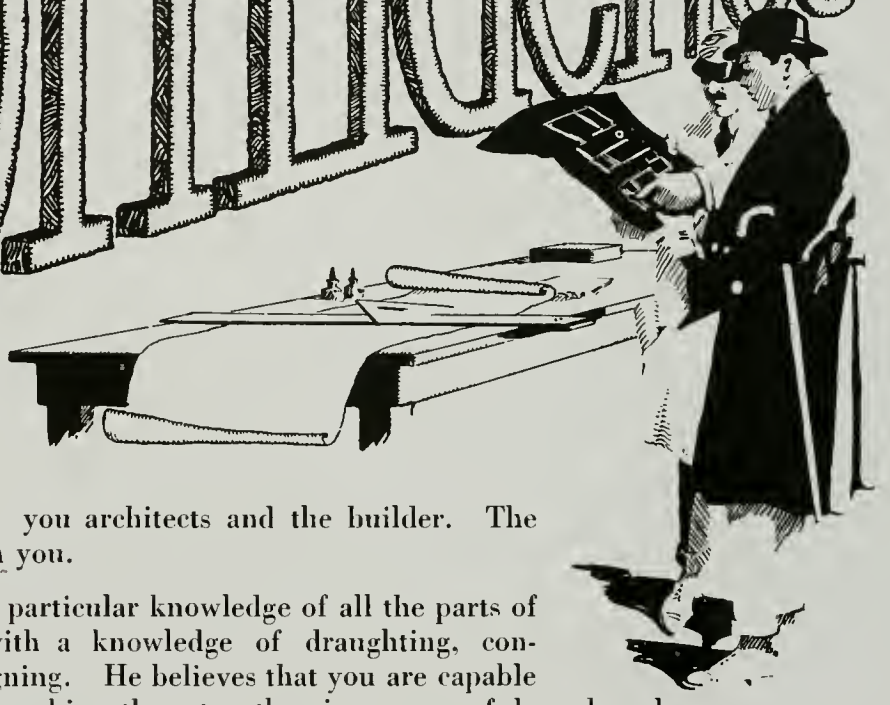

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News of the Industrial World.

We have received copy of an interesting booklet published by the Nephi Plaster and Manufacturing Company, Salt Lake City. We believe it to be one of the most attractive pieces of literature that we have seen, and doubtless a booklet that will not readily be destroyed by an architect. It is entitled, "Wall Surfaces of the Exposition," and besides containing an unusual number of attractive photographs of the Exposition, the directions for the use of Gypsum products, which have been doubtless formulated with a view of assisting architects chiefly in writing specifications, make it a valuable source of reference.

The Nephi Plaster and Manufacturing Company has just completed a Keene's Cement plant, and its product is already finding a ready sale on the Western market. Nephi Gypsum, which is of extraordinary purity and density, is especially well adapted to the production of Keene's Cement, and the extreme whiteness of the material, together with the general structural value, seems to indicate that it is quite equal to the famous English Keene's Cement, which for so many years has been the popular product in the American market.

The City Engineer's office found the Muralo Company's Concreto so satisfactory and wearing on the municipal trolley poles erected several years ago that they specified Concreto on the poles for the Church Street extension. The poles are now being painted.

* * * *

The application and wide range of possibilities of temperature regulation are being appreciated more and more each year in California. The elegant new City Hall in San Francisco, which is practically completed, is equipped with the very latest type of thermostats and control valves in all of the larger rooms, and the heating system, in general, which has been installed there is becoming quite popular, and is likely to become the adopted type of heating for all better class buildings in this State. The Civic Center Library, now in the course of construction, has practically the same type of heating and nearly all important rooms, as in the City Hall, are controlled by temperature regulation.

As further proof of the first statement, the Johnson Service Company, who are the pioneers in temperature regulation on the Pacific Coast and throughout the United States, have installed their thermostats and control devices in such residences as the Mrs. Maud L. Flood residence, the Charles T. Crocker residence at Hillsboro, and the F. C. Talbot residence at San Leandro. The Benjamin Ide Wheeler Hall at the University of California, Berkeley, which is the largest collegiate classroom in the world, will be equipped throughout with temperature control, as well as several other of the new buildings to be erected on the University campus. Other installations of this company, which are completed or under the course of construction, are the Moffit Theater, Oakland; University of California Hospital, San Francisco; about thirty-nine schools of San Francisco, nearly all of the larger banks, and temperature control will be included in a number of the important rooms of both wings of the new City and County Hospital.

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* * * *

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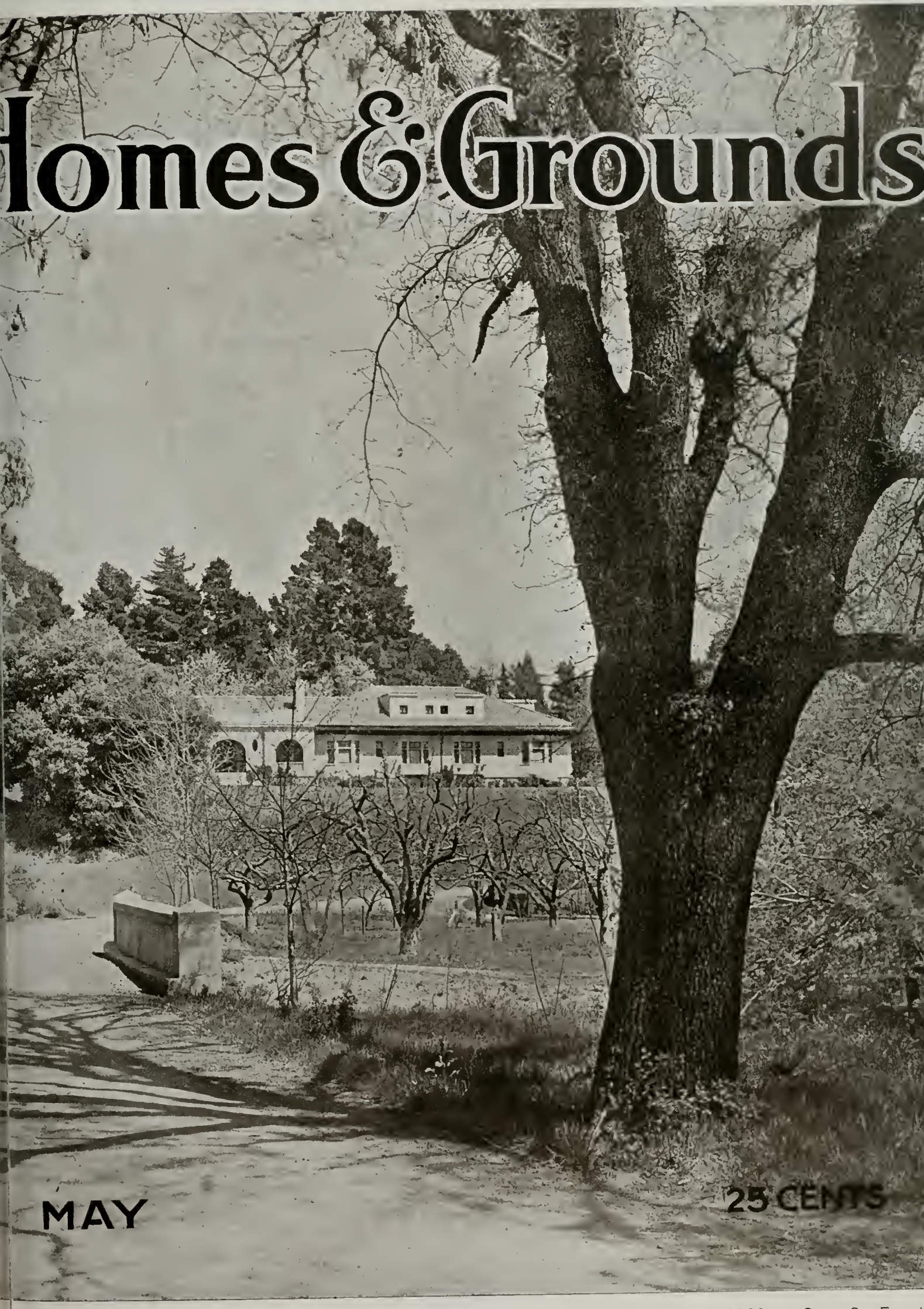

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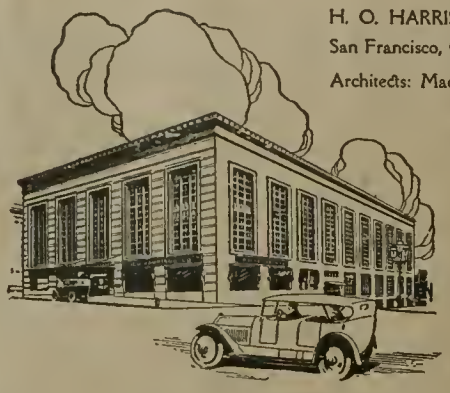

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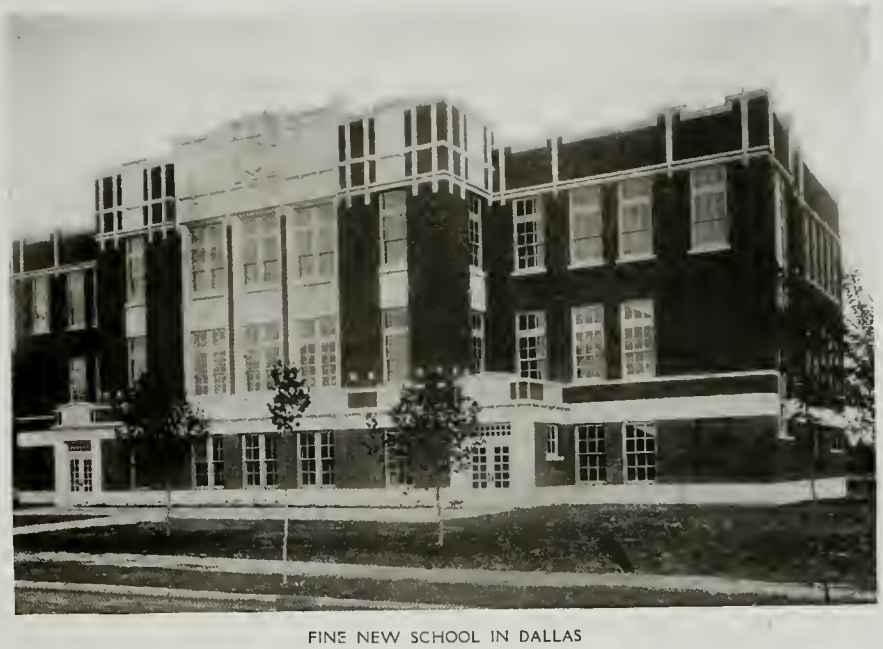

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Vol. XI. No. 6

THE ARCHITECT

J. A. DRUMMOND, Publisher CLARENCE P. KANE, Editor

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¶ Changes in, or copy for, new advertisements, must reach the office of publication not later than the fifteenth of the month preceding issue. Advertising rates and any other information will gladly be given on application.

¶ The editor will be pleased to consider contributions of interest to the profession. When payment for same is desired, this fact should be stated. E. D. McDonald, Northwest Representative, 4100 Arcade Building, Seattle, Washington.

CHANTILLY PAVILLON

THE ARCHITECT

VOL. XI. SAN FRANCISCO, JUNE, 1916 NO. 6

Ballard High School, Seattle

BY EDGAR BLAIR

BEFORE the city of Ballard became a part of the corporate city of Seattle, she had a high school. This high school building at the time of its construction was considered to be the last word in high school construction. It was of frame and accommodated a maximum of about 400 students. The cost of this structure was about $10,000. As time went on and this section of the city continued to grow rapidly, Ballard became a part of the main city. Even before it was annexed, the high school had become inadequate and there was a demand for a new building. With the annexation came the consolidation of the old Ballard school district with that of Seattle School District No. 1. The Seattle school board realized the great need of a new building in this district for high school purposes. In the bond issue voted at the election in December, 1913, there was included a fund for the new Ballard high school building. Owing to the unsound condition of the bond market in the summer of 1914, the school district was unable to sell the bonds at a favorable figure. This condition delayed for several months the start on the construction of the building. In November, however, the school district managed to sell sufficient bonds to carry on this work. The first contract on the building was let November 10, 1914, to the Sound Construction & Engineering Company, for the general construction of the building. Contracts were let later for heating to P. J. Lavan, plumbing to Peterson Hardware & Plumbing Company, electrical work to Ne-Page-McKenny Company, lockers to S. W. R. Dally, electric light fixtures to H. E. Gleason & Company, and seating to the A. H. Andrews Company.

Not much was accomplished in the way of excavation for the building until the month of February, 1915. After that time the work was pushed diligently until it was completed, January 1, 1916. At no time after February 1 was there any delay in the construction owing to weather conditions.

The site of the new Ballard high school is at the northwest corner of West 65th Street and 14th Avenue N. W. The site is about 400 feet square, comprising nearly four acres. Considerable difficulty was met in the way of seepage in the excavation, but this was overcome by the installation of gravel fill and drain tile under the floors of the basement.

The building itself is 200 feet by 218 feet, and three stories in height. There is no basement under the building, except in the center, where the gymnasiums run down and in the rear where the boiler and fan rooms are located. On the ground floor are located the commercial department, four rooms; manual training department, seven rooms; men and women teachers' rest rooms, and upper part of gymnasiums. The commercial department, consisting of four rooms, has two commercial rooms for bookkeeping, and one room each for shorthand and typewriting work. Between the typewriting and shorthand rooms there is a double glass partition, so that one teacher can supervise both rooms. The double glass partition is to prevent the noise of the typewriters from penetrating into the shorthand room. One of the commercial rooms is equipped with a lantern outlet for the use of the department. Illustrated lectures are given on trade and commercial subjects. The manual training department is located on this floor, having seven rooms for wood turning, woodworking, lumber storage, finishing, demonstration and office uses. The object in the shops has been to place motors and machinery in pits underneath the apparatus, so as to give a maximum safety to the students working in this department. The upper parts of the gymnasiums extend through to the ceiling of this floor. The total height of the gymnasium ceiling is twenty-two feet under the beams. These gymnasiums, one for boys and one for girls, are each 50x70 feet in size, the boys' gymnasium only having a running track. In connection with each gymnasium is a large visitor's gallery, reached from the corridor of the ground floor. These visitors' galleries are also accessible from the front entrance, independent of the rest of the building. In connection with these gymnasiums are shower and locker rooms, instructors' office and general storage rooms for apparatus. The girls' shower room is provided with thirty private dressing rooms, connected with showers. On the ground floor are also located the book room, head janitor's office and a small meeting room for classes.

On the first or main floor are located the auditorium, lunch room, office, library, vault, art room, domestic science and class rooms. The auditorium is 70x96 feet, having a balcony and a large stage in connection with it. The main floor of the auditorium is seated with desks for study purposes, the balcony being seated with opera chairs. Seattle high schools differ somewhat from most high school buildings in that the main floors of the auditoriums are used for study purposes. The stage is very large, sufficiently so to accommodate a large graduating class, officials, etc. About three hundred people can be seated on the stage. A large stage is also very desirable for the production of school plays, etc. The stage is provided with a gridiron and all accessories for handling scenery. The office is located on the southwest corner, next to the auditorium. There is the general office and principal's private office, with toilet adjoining, and a vault for the storage of school records. There is also located in this office the master clock, which controls and regulates all of the electric clocks in the building. There are forty-five of these clocks in the building. The clock system was installed by Joseph Mayer & Brothers, of Seattle. The lunch room is located in the center of the building, on the first floor, and has in connection with it a large kitchen, pantry and store room. The kitchen has a direct exit to the ground level at the rear of the building, so that supplies can be taken in without going through the main building. The kitchen is provided with tile floor and wainscoting, and has among its equipments steam cookers, soup kettles, dishwasher, gas ranges, etc. The domestic science cooking room is located next to the lunch room, so that the food which is cooked there can be taken into the lunch room and sold, thus making this department in a measure self-supporting. The main lunch room will accommodate about three hundred students at one time, and is so arranged that the lines of students at the counters do not interfere with those students who are leaving the lunch room. There are separate entrances provided for entrance and exit from the lunch room. There is also provided, on the first floor, a large sewing room, and in connection with it a model laundry, containing six tubs, ironing boards, electric irons, etc. A model dining room and kitchen are also provided, where the girls in this department can prepare complete meals and serve them to a limited number of guests from the faculty or elsewhere, as the case may be.

Efficiency in Country Schools

BY NORMAN R. COULTER

"EFFICIENCY" is probably one of the most hard worked words in the English language, but, nevertheless, is a good word, and the only one that really means getting the most out of everything. To properly carry out or to perform the meaning and intent this word conveys, means that the efficient school must be equipped with the most practical, modern appliances, books, teachers, tools necessary for each particular line of work followed.

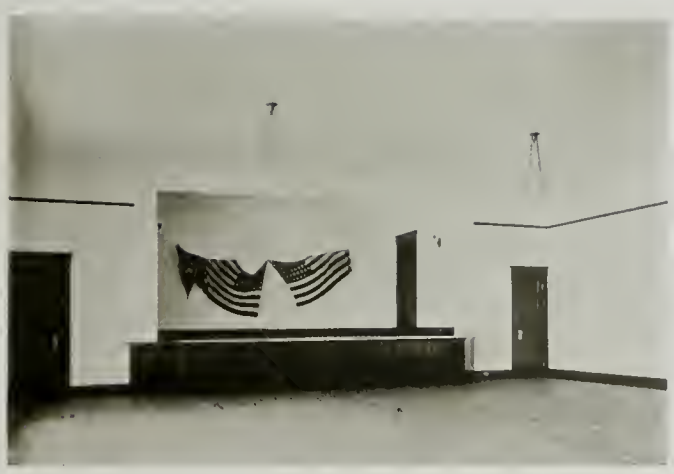
Being properly fitted out with teachers and equipment, however, will not bring a school up to the standard of full efficiency if a good and suitable place is not provided for the use of said equipment. To get the fullest possible efficiency means a comfortable building, well lighted, heated and ventilated, with convenient arrangement of rooms, corridors, etc.

The schools in the cities and large towns have been usually kept pretty well modernized, but it is only during the last few years, that the smaller schools in the country and villages have approached anywhere near what might be called efficient. School boards are doing much now for the improvement of buildings and equipment. The old sentiment, that what was good enough for grandfather is good enough for the child, seems to be dying out completely. Boards, as well as the general public, are realizing that children must have proper tools, instructors, and school buildings if they are to be fitted for the great ball game of life ready to pitch, catch or make a home run.

But after it is admitted that all these things are true, then comes the very serious question of cost, and in these times, when everything is high, cost is a matter to be carefully considered. Sometimes the highest priced article is cheapest in the long run, but simply because it does cost the most money, does not always mean that it is the most efficient. This especially is true in buildings, and while ornamentation and elaboration, when properly added, without doubt enhance the value and appearance of a structure, much good money has been wasted trying to make an elaborate appearing building which has fallen far short in every other manner. When money is not available, it is without question, better far to construct a plainer and more serviceable building than to make an effort to produce a showy exterior. Even the plainest building can be made to appear attractive, serviceable and efficient though it may lack the show of misspent money.

The writer at this time is employed to superintend extensive repairs on a building apparently erected mainly for show. Now the hard-earned money of the taxpayers must be spent a second time to do over poorly and cheaply performed work. Leaky roofs, gutters, windows, skylights, falling plaster as well as many other annoying as well as serious defects have appeared in this practically new building. One especially noticeable feature of wasted money is in the enormous high-pitched roof with gables, dormers and ridges containing enough wasted space to comfortably take care of half the entire building, so poorly constructed that new

GENERAL VIEWS OF SELBY PUBLIC SCHOOL, SELBY, CAL.
NORMAN R COULTER, ARCHITECT



AUDITORIUM

ENTRANCE DETAIL

trusses have to be installed to keep the ceiling from collapsing. Such a building is not efficient, not economical, and is a menace to the health and life of teachers and pupils.

Schools for the small towns and country can be built which will be efficient, comfortable and of good architecture, every dollar being expended where it will do the most good. But good material, well and properly put together, must be used.

This article is supposed to be on a type of small schools suitable for grammar and high schools, where cost is an item, and the greatest efficiency for the small amount allowed to be expended is the greatest consideration.

VIEW OF OPEN TOP FURNACE

The writer has drawn plans for a number of such schools already built, and also underway, of a type which is meeting with favor from the districts which have selected them. It is of this type that the Editor, Mr. Clarence Kane, has requested a description.

There is nothing particularly new used in materials or workmanship, but the effort has been made to get the best and to make the most out of both. The type of the Selby School gives at the present time two class rooms, cloak rooms, boys' and girls' toilets, library, teachers' room (with private lavatory and toilet), and two open air rooms used for play rooms. This building was erected with the idea of adding to later, and the building of the open air play rooms gives a structure of such shape that by merely enclosing the side with suitable windows, and putting in the floor, another class room is available at each end of the building, for very small additional cost later on. Meanwhile, the open air rooms can be used for rainy-day playgrounds or outdoor classes in hot weather.

Continued on page 380.

WELL LIGHTED CORRIDOR

EXTERIOR VIEW

EXTERIOR AND INTERIOR VIEWS, SELBY PUBLIC SCHOOL, SELBY, CAL.
NORMAN R. COULTER, ARCHITECT

Open Air Type of School at Suisun

BY EDWIN J. SYMMES

THE new grammar school for the Crystal School District at Suisun is representative of a new epoch in suburban school development in California.

The building is constructed of reinforced concrete and designed on the one story unit plan. This type of building is capable of the most flexible scheme of future expansion, and each class room is provided with a separate exit, thereby removing all menace of fire and panic.

The Suisun school offered an interesting example for the solution of a distinct problem. East light, which is the ideal light for a grammar school class room in this section of the State, was obtained for every room. In order to make the building as compact as possible, the open court type was adopted and the strong west winds were shut out by means of a high screen on the west side.

The school at present is provided with four class rooms, a room for domestic science, and one for manual training, a teachers' lunch room, a principal's office, a teacher's rest room, and an auditorium to seat 500. In addition, there is a neighborhood club room or social hall on the second floor, which may be used as an extra class room. The teachers' lunch room will be used as a model dining-room, and is placed adjacent to the domestic science room for the sake of accessibility to make sewing easy.

The hall is equipped with a motion picture booth, and was designed to solve the question of acoustics. The auditorium is somewhat larger in this size of school than would generally be required. Its adjuncts are so designed that, when a function is given in the auditorium in the evening, the school section may be entirely shut off from the rest of the building, allowing the boys' and girls' rest rooms and toilets to be used as men's and ladies' parlors and toilets respectively.

SUISUN GRAMMAR SCHOOL, SUISUN, CAL.

DETAIL OPEN COURT, SUISUN GRAMMAR SCHOOL
EDWIN J. SYMMES, ARCHITECT WM. H. CRIM, Jr., ASSOCIATE

The building is heated and ventilated by warmed fresh air, aided by direct steam, and is equipped with an intercommunicating telephone system, a system of electric gongs, and an electric clock system with the master clock in the principal's office.

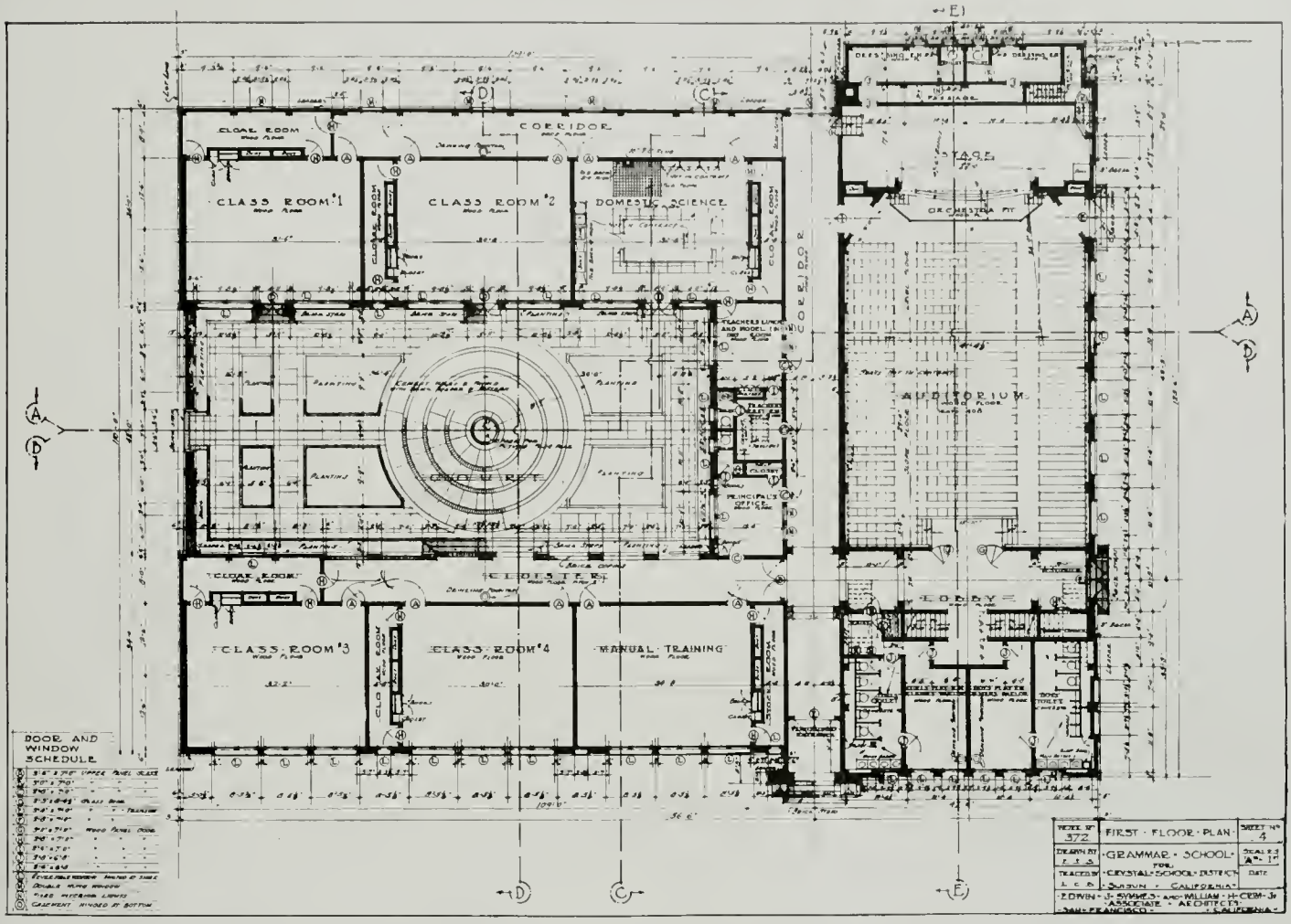
EFFICIENCY IN COUNTRY SCHOOLS

Continued from page 380

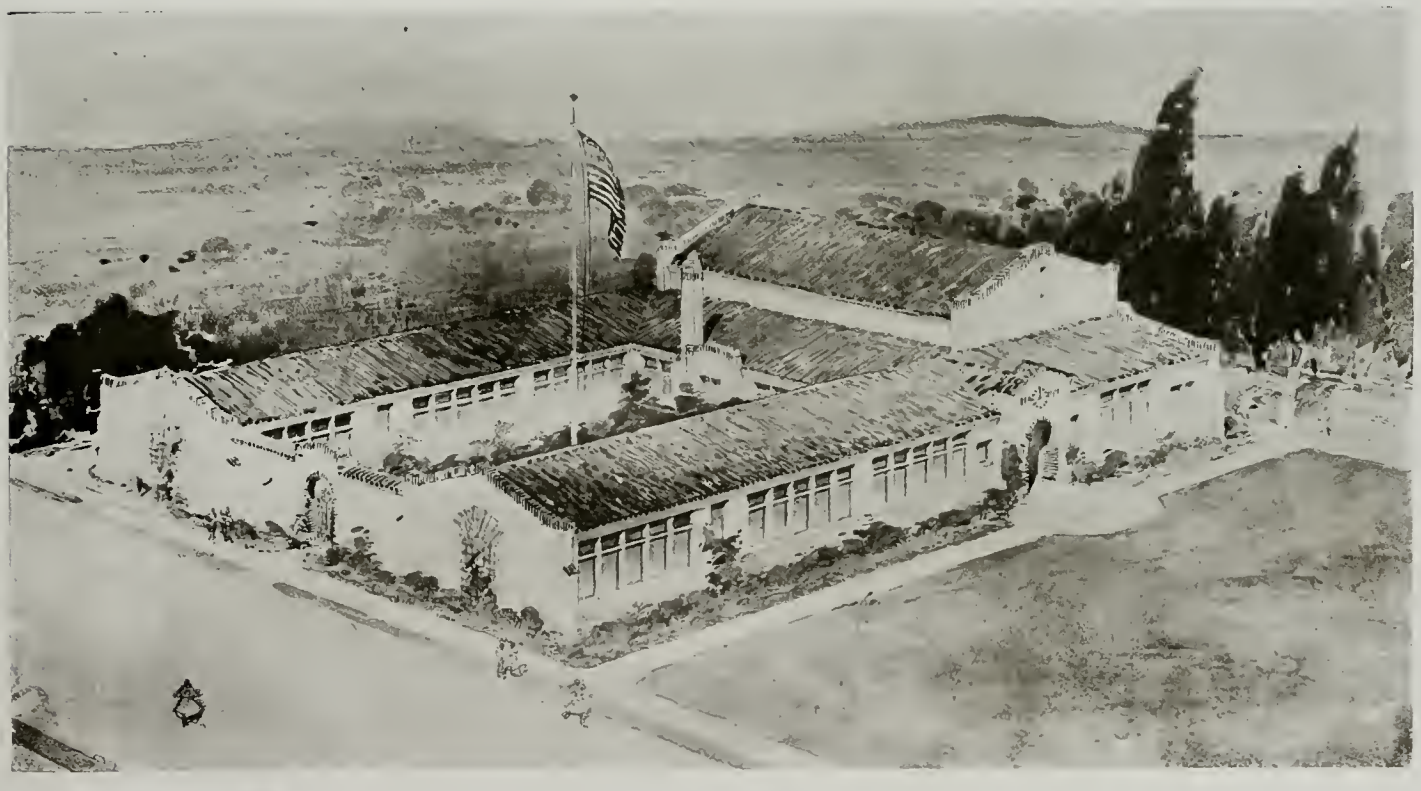
of the room, gradually dropping to the floor as it becomes cooler. The smokestack of the furnace enters an ordinary brick chimney, only of much larger proportions than usual, and extends thence upwards in the center of the brick flue to the top. By placing the smoke-pipe thus there is considerable air space in the corners and around the smoke-pipe, which, being heated, creates an upward draught in the brick flue, producing what is called an aspirating chimney. From this brick flue is there an opening through a metal screen into the classroom at the floor level and the cold foul air is sucked into and up the brick chimney while fresh hot air is pouring into the room from the upper part of the furnace jacket.

This system will ventilate the room with the doors and windows closed if it has been properly proportioned and installed. It also heats the room very uniformly, the pupil near the furnace being no warmer than the one in the far corner.

The assembly hall is amply able to accommodate the entire school, finished in a plain manner, with a fair-sized stage, dressing rooms off each side, basin of running water, footlights and curtain. The lights on the stage and in the audience-room are operated by switches from the dressing-rooms. At the rear of the assembly-room outside and over the upper portion of the rear corridor is built a metal-lined motion picture room for machine and operator, with operation holes cut through the wall of the assembly-room so that the pictures can be readily projected upon the stage curtain. There is no doubt but what the assembly-room is one of the most useful rooms of the whole building and should be eliminated even though it may be necessary to leave the studs and joists showing with only a floor down.



FIRST FLOOR PLAN



SKETCH FOR SUISUN GRAMMAR SCHOOL, SUISUN, CAL.
EDWIN J. SYMMES, ARCHITECT WM. H. CRIM, Jr ASSOCIATE

General Conditions of the Contract

BY FRANCIS W. GRANT

The fourth of a series of articles discussing the code adopted by the American Institute of Architects

IF PAYMENTS are made on valuation of work done, such application shall be submitted at least ten days before each payment falls due. If required, the contractor shall, before the first application, submit to the architect a schedule of values of the various parts of the work, aggregating the total sum of the contract, divided so as to facilitate payments to subcontractors in accordance with Article 44 (c) made out in such form as the architect may direct and, if required, supported by evidence as to its correctness. This schedule, when approved by the architect, shall be used as a basis for certificates of payment, unless it be found to be in error. In applying for payments, the contractor shall submit a statement based upon this schedule and, if required, itemized in such form as the architect may direct, showing his right to the payment claimed.

CLASS ROOM, SAN DIEGO HIGH SCHOOL
QUAYLE BROS. & CRESSEY, ARCHITECTS

This clause attempts to cover two subjects only one of which, and that by far the least important, being suggested by the title. All that portion referring to application for payments belongs under the caption "Payments" and the remainder would then be more appropriately labeled "Schedule of Unit Prices" or "Schedule of Values."

The schedule of prices should either be required or not required and the clause should be explicit on the subject, not subject to determination by some unnamed person at some unmentioned time.

Article 27. CERTIFICATES AND PAYMENTS. If the contractor has made application as above, the architect shall, not later than the date when each payment falls due, issue to the contractor a certificate for such amount as he decides to be properly due.

No certificate issued nor payment made to the contractor, nor partial or entire use or occupancy of the work by the owner shall be an acceptance of any work or materials not in accordance with this contract. The making and acceptance of the final payment shall constitute a waiver of all claims by the owner, otherwise than under Articles 16 and 29 of these conditions or under requirement of the specifications, and of all claims by the contractor, except those previously made and still unsettled.

Should the owner fail to pay the sum named in any certificate of the architect or in any award by arbitration, upon demand when due, the contractor shall receive, in addition to the sum named in the certificate, interest thereon at the legal rate in force at the place of building.

(To be continued)

SAN DIEGO HIGH SCHOOL, SAN DIEGO, CAL.
QUAYLE BROS. & CRESSEY ARCHITECTS

BALLARD HIGH SCHOOL, SEATTLE
EDGAR BLAIR ARCHITECT

GENERAL VIEW

GYMNASIUM

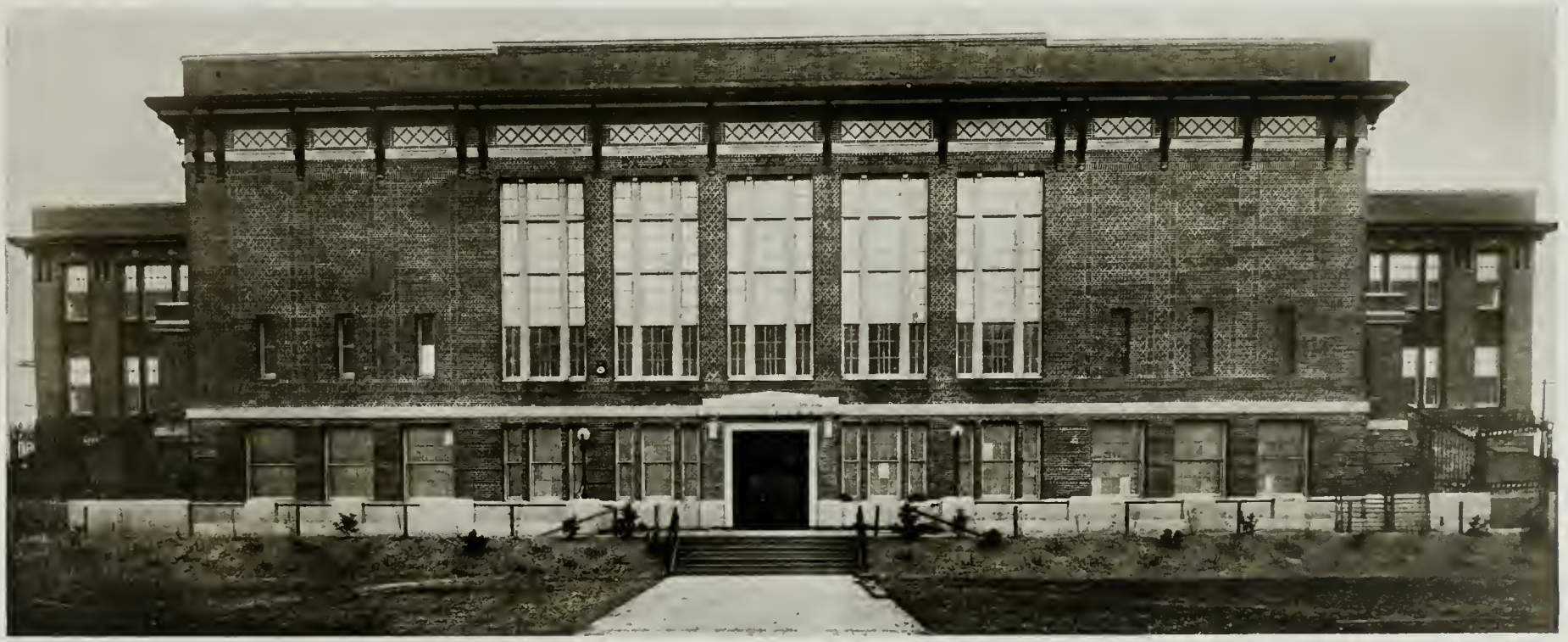
VIEW IN FOOD LABORATORY

BALLARD HIGH SCHOOL, SEATTLE

EDGAR BLAIR, ARCHITECT

VIEW IN AUDITORIUM

VIEW IN LABORATORY



SOUTH FRONT VIEW

BALLARD HIGH SCHOOL, SEATTLE

EDGAR BLAIR, ARCHITECT

GENERAL VIEW

LABORATORY

DOMESTIC SCIENCE DEPARTMENT

Photos by Gabriel Moulin

SANTA CRUZ HIGH SCHOOL
WM. H WEEKS. ARCHITECT

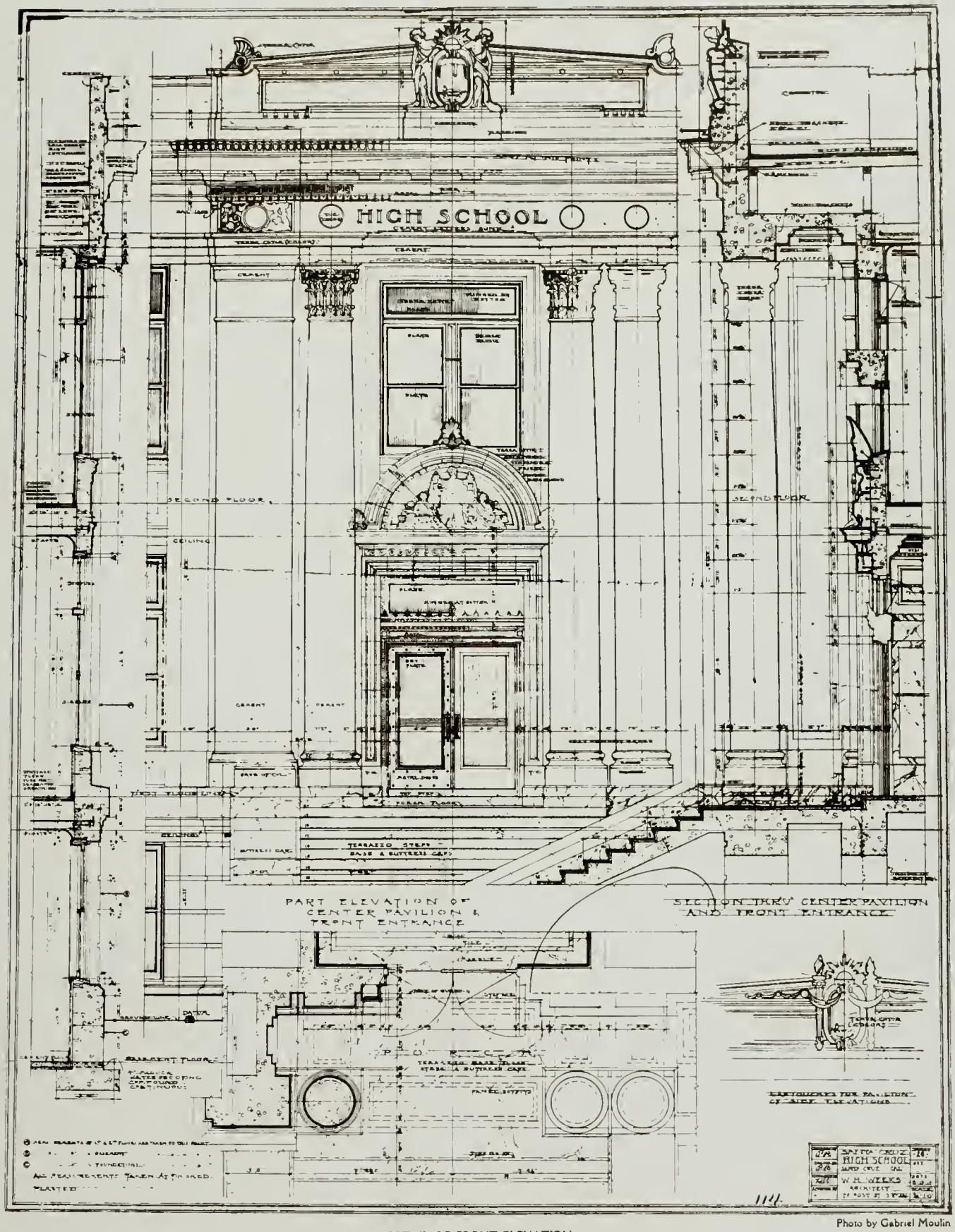


Photo by Gabriel Moulin

DETAIL OF FRONT ELEVATION
SANTA CRUZ HIGH SCHOOL
W H WEEKS, ARCHITECT

GENERAL VIEW OF ENTRANCE FRONT

GENERAL VIEW FROM STREET

SHATTUCK SCHOOL, PORTLAND

F. A. NARAMORE, ARCHITECT

DETAIL OF ENTRANCE
SHATTUCK SCHOOL, PORTLAND
F. A. NARAMORE, ARCHITECT

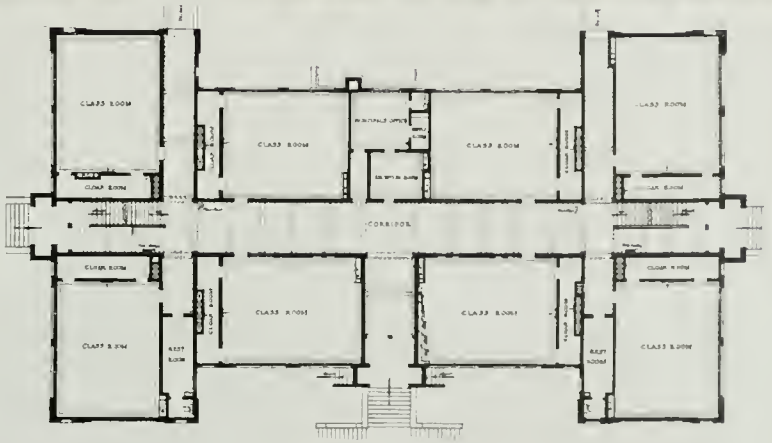
KENNEDY SCHOOL, PORTLAND
F. A NARAMORE, ARCHITECT

GENERAL VIEW

VIEW OF EXTERIOR, FROM REAR

LOWELL SCHOOL, BELLINGHAM, WASH.

T. F. DOAN, ARCHITECT

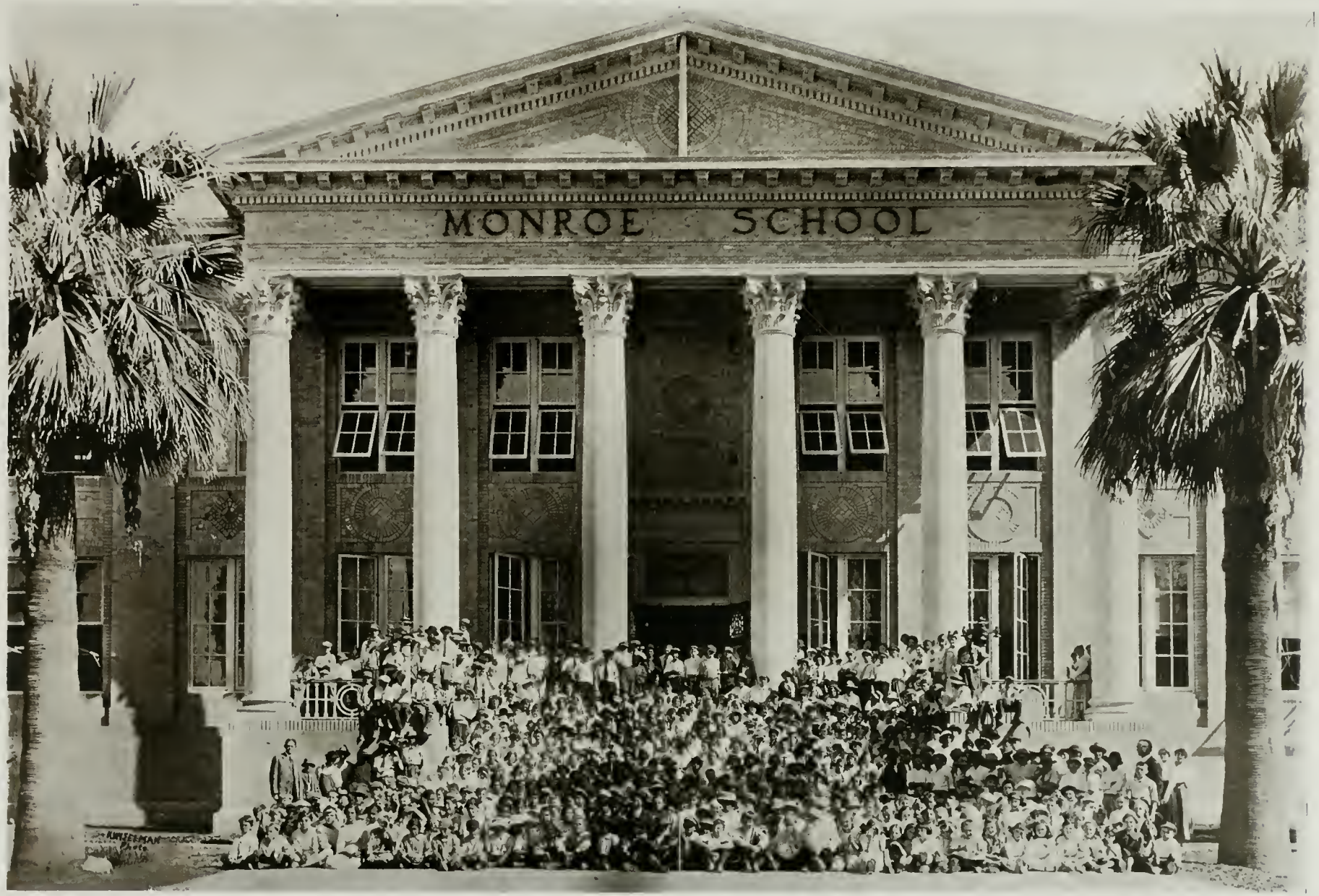


ENTRANCE DETAILS

FIRST FLOOR PLAN

LOWELL SCHOOL, BELLINGHAM, WASH

T F DOAN ARCHITECT



MONROE SCHOOL, PHOENIX, ARIZ.
NORMAN F. MARSH, ARCHITECT

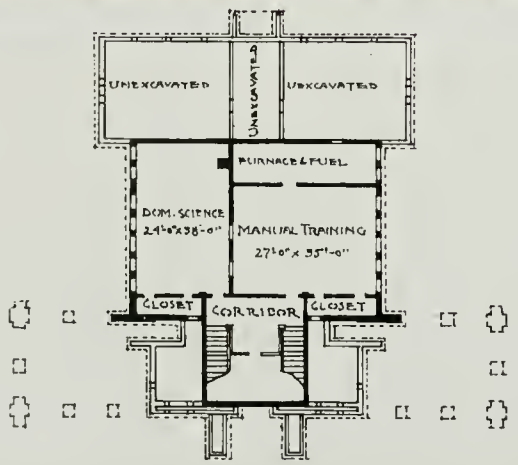
ENTRANCE FRONT

ENTRANCE DETAIL

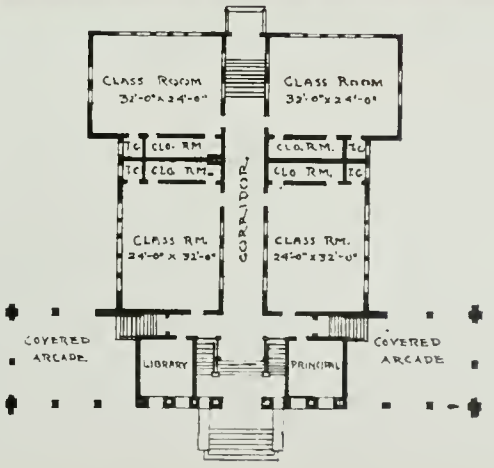
SAN DIEGO HIGH SCHOOL, SAN DIEGO

QUAYLE BROS & CRESSEY, ARCHITECTS

ALHAMBRA SCHOOL, PHOENIX, ARIZ.
LESCHER & KIBBEY, ARCHITECTS



BASEMENT PLAN



FLOOR PLAN

MESA UNION HIGH SCHOOL, MESA, ARIZ.
NORMAN F. MARSH, ARCHITECT

McKINLEY PARK SCHOOL, RENO, NEV.
G. A. FERRIS ARCHITECT

RENO HIGH SCHOOL, RENO, NEVADA
G A FERRIS ARCHITECT

GENERAL VIEW

MAIN HALL

RENO HIGH SCHOOL, RENO, NEV.

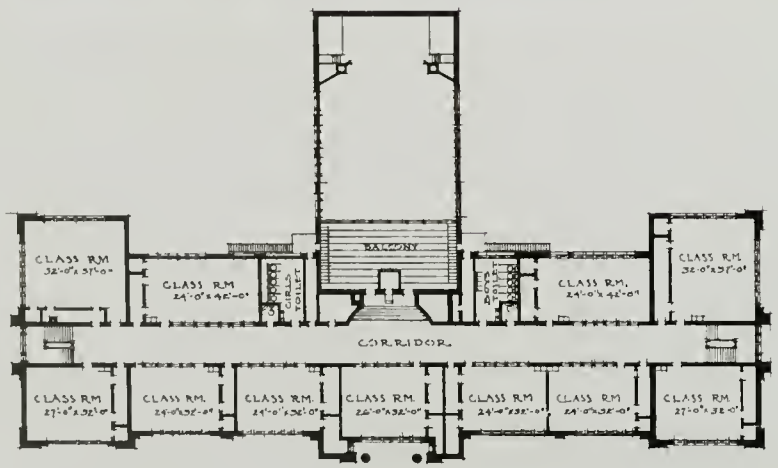
G. A. FERRIS, ARCHITECT

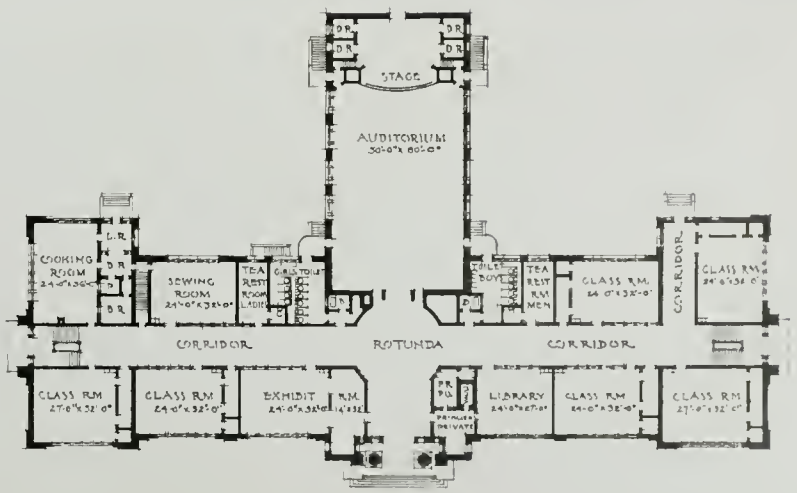
ASHLAND HIGH SCHOOL, ASHLAND, ORE.
G A FERRIS, ARCHITECT

GRADE SCHOOL RENO, NEVADA.
G A FERRIS, ARCHITECT

McKINLEY PARK SCHOOL, RENO, NEV
G A FERRIS ARCHITECT

MESA GRADE SCHOOL, MESA, ARIZ.

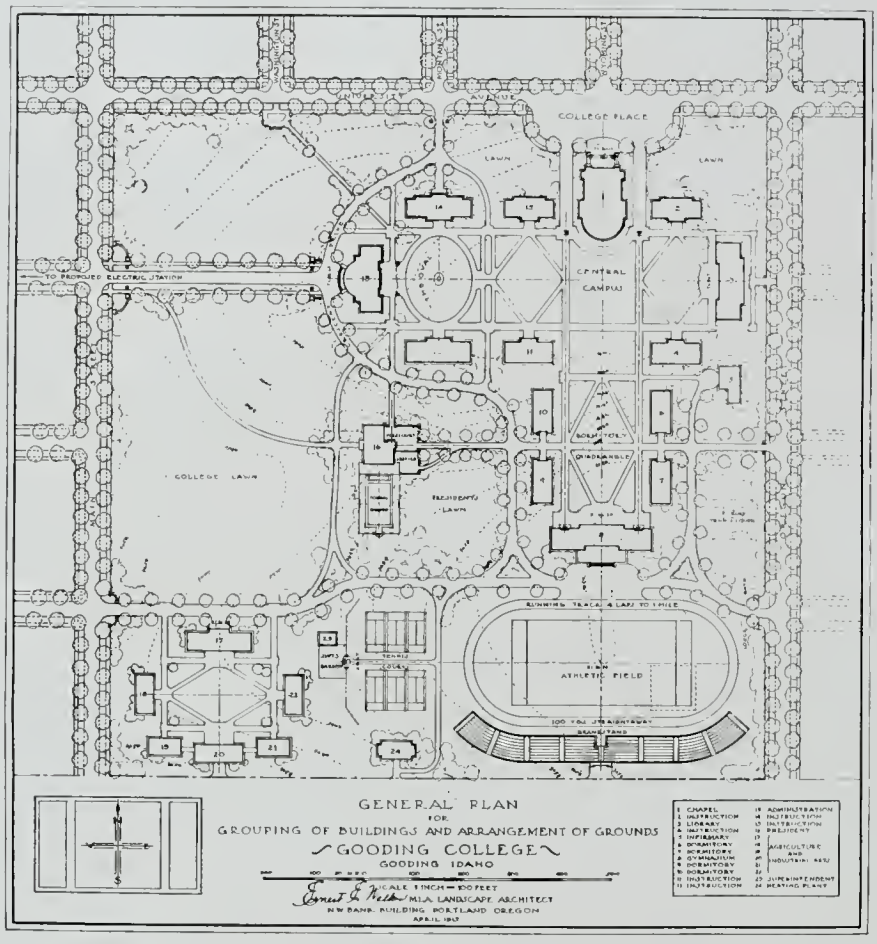




College Campus Planning

BY ERNEST E. WALKER, A. B., M. L. A.
Landscape Architect, Portland

AMONG the monuments marking the progress of civilization throughout the ages, universities will ever stand conspicuous. Gathered here are the forces which move humanity and make history, the powers that fit new thoughts to new conditions, which help to elevate and ennoble man, to refine his tastes, enlarge his ideas and enrich his interests. Here is a vitalizing food for men and women of reflection, and of action, a wealth of stored experiences which come to us as an inheritance of the past and a promise of the future. Men are flashes of thought, which come and go; results alone remain.



GENERAL PLAN OF GROUNDS FOR GOODING COLLEGE, GOODING, IDAHO
ERNEST E. WALKER, LANDSCAPE ARCHITECT

Well designed and constructed grounds have colored every dream of future life, and the hope of happiness in this, and he who can make them more beautiful, has helped to exalt the sentiment of religion, poetry and love, for in truth such are a state, national and world possession, and the builder like a great poet who has influenced the life of thousands, putting them in touch with the greatness of the past, lifting their thoughts and aspirations to a higher level, revealing to them the light of their own soul, opening their eyes to the beauty of the world. Of the important problems which occupy the minds of men, there are pre-eminent guiding principles, which control all other details, and of exceeding importance are these in the grouping of buildings and arrangement of grounds for colleges and universities, where the qualities of use, convenience and beauty count for so much. But unfortunately in the development and enlargement of educational institutions, very little systematic attempt has been made toward the marshalling of fundamental principles which might be of suggestive value, although experience has been accumulating for centuries which might serve as a warning and guide in developing these institutions, many of them to be the important colleges and universities of tomorrow. To cure, is the way of the past, to prevent, the divine voice of the future.

Some fundamental principles on which all harmonious landscape development for colleges must proceed, and each of such vast importance as to deserve a separate lecture. Among these are:

(1) The convenient location, grouping and adjustment of buildings to the contours of the site, or, let us say, The Preservation and Creation of the Site.

(2) The adoption of an appropriate ideal of development, or, briefly, A Far-Sighted General Plan.

(3) A Style of Architecture harmonious with situation and topography which shall adequately express a seat of learning and embody the most ripened scholarship.

First, then, Preservation and Creation of the Site. A guiding principle and one having a very direct bearing on convenience and economy is the necessity for adjusting the plan to the contours of the site, securing easy gradients, and the local expression and perfect harmony, which due consideration for the configuration of the site always reflects. To obtain the highest results will entail

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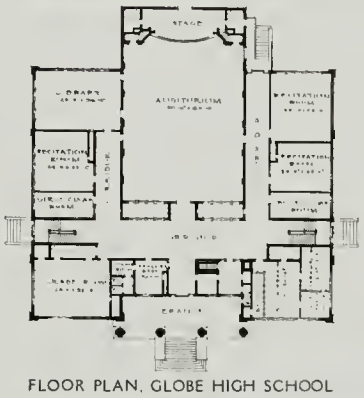
careful acquaintance and study of the site, united with patience and an instinctive feeling for landscape design. It is necessary to grasp the configuration of the site as a whole, and to catch the atmosphere and traditions of the district with inherent artistic perception, or even the rarer response of poetic grace. The first practical object in view is the devising of means by which alterations and improvements may be carried out without demolition of old buildings rich in historical associations, or the obliteration of the characteristic natural features of the site.

The landscape architect, if he is a worthy member of the artistic profession, will start from the topographic individuality of the site, as a guiding element in his plan of arrangement and distribution of buildings, and in like manner he will note the position and character of all objects of natural and historic interest within the scope of operation, as so many generating points round which his ultimate scheme of development will crystallize, or the perfect orchestration, shall we call it, of Nature, Art and Science. And no amount of brilliancy or richness expended upon parts will atone for lack of range and power to grasp the fundamental relations of the problem, and this suggests in logical sequence the next broad principle on which all harmonious development must proceed, and the second mentioned in the beginning of the paper.

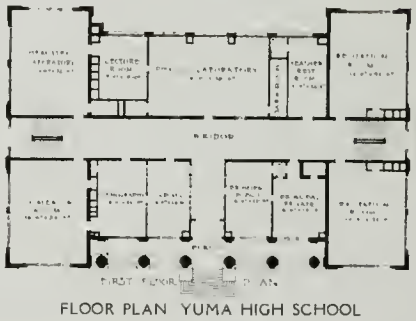
Namely, A Far-Sighted General Plan, not one that is fixed and immutable nor yet one that is vascillating, but one that is constantly adjusted and brought up-to-date as new lights are thrown upon the future needs and conditions of the university, so that it shall at all times represent the mature judgment of the period as to the best aims, all things considered, for the college to keep before it. It is entirely practicable to plan buildings and grounds so as to properly provide for the future.

The greatest neglect is the failure consistently to use art and skill and foresight to remodel existing conditions and properly provide for the future. The inception of great planning of buildings and grounds in this country was in the World's Fair in Chicago. The beauty of its orderly arrangement of buildings and grounds made a profound and lasting impression, and the success which the Landscape Architect and Supervising Architect achieved in carrying out the plan demonstrated the practical necessity of a Far-Sighted General

GLOBE HIGH SCHOOL, GLOBE, ARIZ.
LESCHER & KIBBEY, ARCHITECTS



FLOOR PLAN, GLOBE HIGH SCHOOL



FLOOR PLAN YUMA HIGH SCHOOL

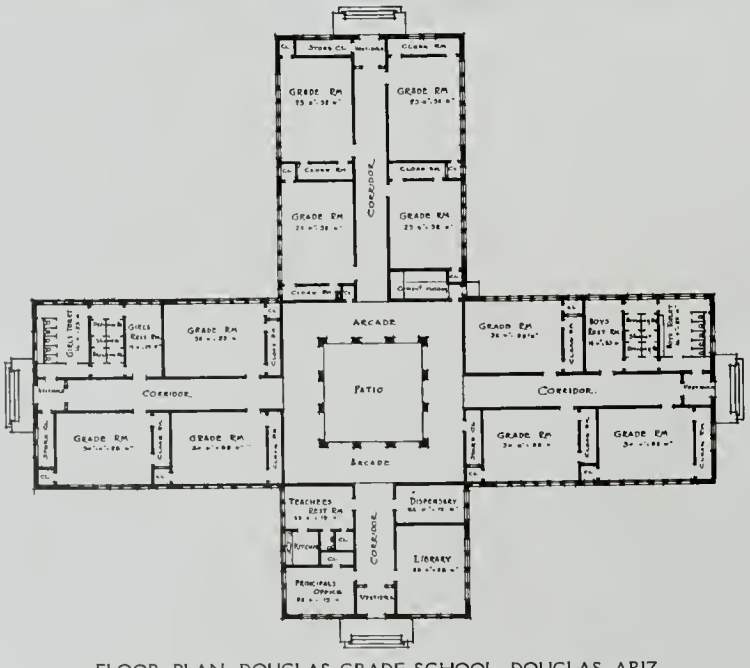
YUMA HIGH SCHOOL, YUMA, ARIZ.
LESCHER & KIBBEY, ARCHITECTS

DOUGLAS GRADE SCHOOL, DOUGLAS, ARIZ.

Plan. And of the important principles here embodied, none is of greater value than the advantage of planning extensive buildings and grounds as one far-sighted harmonious whole, nor have colleges failed to appreciate or profit thereby.

But the question always arises when a given university is under consideration, whether it would be wisest to limit suggestions to present available means, or, on the other hand, to work out and diagram whatever a sane imagination suggests. If the first be our limit, our work will be tame and ineffectual and will not arouse that enthusiasm without which nothing worth while is ever accomplished, it is doubtful if the meager things proposed will be carried into effect. Such is humanity: We may expect support from a great cause, whereas, mankind will slip quietly away from the merely obvious and commonplace. Not that the obvious and commonplace are to be neglected, far from it; but to realize them we must seek for more. Moreover, there is the other way of looking at the question, namely, the one that has to do with the growth of man's knowledge, of his perceptions, and, finally, of his desires. Our pace of development having immensely accelerated, coming generations are going to demand and get results that would stagger us. The college can make its strongest appeal to its students, alumni, and the public by setting before them a tangible vision of

PATIO, DOUGLAS GRADE SCHOOL, DOUGLAS, ARIZONA



FLOOR PLAN, DOUGLAS GRADE SCHOOL DOUGLAS, ARIZ.
LESCHER & KIBBEY, ARCHITECTS

the ideals and purposes of a great seat of learning, and this can be accomplished best by A Far-Sighted General Plan, showing a great goal towards which the college may gradually work as opportunity and finance permit. This appropriate ideal pictorially presented will show sites for future buildings and orderly arrangement of grounds, so that when the need for a new building arises it may be possible at once to select a site upon which it may be erected where it will not interfere with existing buildings and landscape development, but will contribute to the completion of the entire plan. If from the outset a process of harmonious development be followed each additional building will enhance the effect of the group as a whole, and perhaps encourage a hesitating official to carry the development a step farther. For there is not a citizen of the state, a regent, professor, or alumnus of the college who will not feel a new incentive when he thinks that he is helping to direct orderly arrangement of buildings and grounds that are a part of the university of the future. Not a landscape architect who will not plan with greater care, because of the vision. And, in planning for the future, no great foresight is needed to realize that regard should be had not only for the growth of existing departments and schools, but for the establishment of entirely new educational units.

(To be continued)

THE ARCHITECT

VOL. XI. SAN FRANCISCO, JUNE, 1916 NO. 6

EDITORIAL.

WE have been requested by Architect Bertram G. Goodhue, 2 West 47th Street, New York City, Chairman, Committee on Le Brun Traveling Scholarship, to give notice of the third bi-annual competition for the Le Brun Traveling Scholarship, founded by Pierre L. Le Brun, to be held in the summer of 1916. It is open to any architect, a citizen and resident of the United States, between twenty-three and thirty years of age, and who is not, nor has been the beneficiary of any other traveling scholarship, and who has had at least three years' experience as draughtsman or practicing architect. The amount is $1,000.00, the period of the scholarship not less than six months.

Each competitor must be nominated by a member of The New York Chapter, A. I. A., who shall certify in writing that the above conditions are fulfilled by the nominee and that in his opinion the nominee is deserving of the scholarship.

All persons who are eligible and desire to compete are requested to send their application to Mr. Goodhue before July 15th, 1916. Applications must be accompanied by a statement of residence, citizenship, age, experience and general qualifications and by the necessary nomination and certification from a member of the New York Chapter, A. I. A. Those not having the acquaintance of a member of the Chapter may avail themselves of the services of any well known architect who can vouch for them to a member of the New York Chapter, with whom he is acquainted.

Architects throughout the country are requested to bring this notice to the attention of their eligible draughtsmen.

* * * *

The adoption of a prevalent mode or national style of architecture does not necessarily mean a suppression of individuality as claimed by some writers. There have been, at different periods, both in this country and abroad, revivals of different styles and schools of architecture. During these times there has evolved the work of some of the world's greatest architects and, surely, it cannot be said that the individuality of their efforts was in any manner stifled.

As a matter of fact, the natural growth and development of a certain style in architecture is quite apt to invite exaggeration and eccentricity, by departure from the established mode in an effort to attain individuality. Certain writers have advanced the claim that individuality is productive of collectivism. These writers say that true individuality leads to mutual sympathy and true union, but a recognition of the possible correctness of other men's views and works, while different from one's own, easily discloses the existence, universally, of a creative spirit widely varying and represented through a variety of medium.

DETAIL ENTRANCE FRONT, CLAWSON, SCHOOL, OAKLAND, CAL.
JOHN J DONOVAN, ARCHITECT

A toleration of the thought and action of others provokes true union and sincere sympathy, but if we do not place ourselves in a position of egoistical superiority we must grant sincerity to their thought and action.

Individuality is a subconscious expression and intense desire. To give evidence of individuality is generally prompted by an egoistical feeling of superiority or a craving for distinction. This may result in notoriety, but more generally does not add to the popularity of the architect nor the creator.

True individuality is expressed not because it is different from other men's methods, but because it is the result of an intention to do what is right.

* * * *

At the annual meeting of the Seattle Architectural Club held in May, the following officers were elected for the year: J. Lister Holmes, president; Arthur Dysart, vice-president; V. D. Westbrook, secretary; George W. Huey, treasurer. Headquarters of the club are now at 1202 Marion Street.

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Efficiency in Country Schools

Continued from page 339

As a matter of fact, all the class rooms can be made virtually into open air rooms, as six large windows extending to the floor can be entirely opened, making practically the entire side of the room open. Each class room is finished with wainscoted base under the blackboard, and above the blackboard is a panel of wood with molded cap. This panel is suitable space for tacking up drawings and papers. Three feet above is a regular picture mold for permanent picture hanging. Class rooms are about 12 feet 6 inches to 13 feet in height with windows coming nearly to the ceiling. Blackboards are of good slate, and good slate means freedom from scales, flint and other defects, of smooth even surface, tight joints, well set and of uniform color. While there are several kinds of blackboard on the market, which some of the firms say are better than the slate, from experience, the writer is of the opinion that good slate excels all others. It costs more, but is worth more.

In regard to the structure, there seems to be a growing demand for one-story building, and this type of building has many things in its favor. The long, low plastered buildings with red tile or broken brick roof of Spanish mission architecture seem to be appropriate in every place, and can be built more easily, more durably, and better for less money than any other style. A strong wooden frame on good concrete foundations, the frame sheathed with Oregon pine or Douglas fir covered with waterproof paper, and then a first-class job of cement plaster on galvanized lath, makes a durable exterior wall for minimum cost. The patent plaster known as Kellastone is better yet than cement. The writer and a school board interested in selecting a good exterior plaster, visited more than a dozen buildings of the patent plaster exterior, finding them all in good condition, while several cement exteriors were in bad condition. Cement, while an excellent material, requires more careful handling than it usually gets, despite precautions of good, capable architects and conscientious contractors.

The roof is of rather flat construction, well supported, and braced to prevent sagging, composed of inch Oregon pine sheathing not over eight inches wide, well nailed. The best covering at the minimum cost perhaps is five-ply of 15-pound saturated felt, well cemented together, and then finished with a heavy coat of asphaltum, covered with small broken pieces of pressed brick. There are many kinds of roofing material on the market of excellent quality, and some of higher grades than of the roof described, but for actual wear and tear, this compares favorably with any type.

Of great importance are the entrances and the hallways. The main entrance naturally being the central feature of the building, opens into the large main corridor which divides into two smaller corridors leading to the rear entrances from the boys' and girls' playgrounds. In addition to these entrances are two exits into the open-air playrooms so in case of a sudden panic it would be possible for the whole building to empty in all directions. Wide, commodious halls are of particular advantage for assembling and marching, but there is such a thing as making a waste of floor space in halls and corridors entirely too large, however it is always better to have them a little too large than on too small a scale.

Floors of corridors and class rooms should be double, the first, or under-floor, of inch Oregon pine laid in a diagonal manner, and the upper floor of maple, or next best, vertical grained Oregon pine, well laid, nailed and top smoothed. The proper laying of floors is of much importance as the best of material poorly laid will give a most unsatisfactory result. The floors of the boys' and girls' toilets are white ceramic tile set in cement. This costs but little more than fibrestone or cement finish and is so much better, both in appearance and sanitary consideration, that it is well worth the money. A tile base with cove corners extend up on the walls for about one foot, meeting the wooden wainscoting above it.

Plumbing is of the best, with separate partitions for the toilets with doors and partitions at least ten inches off the floor, held rigid by means of metal piping securely fastened. Drinking fountains are provided in each open-air playroom and in main corridor. The teachers' room is provided with a separate toilet room with lavatory and running water, being of special value in case a pupil is hurt playing or is taken suddenly sick. This room is also provided with a medicine locker containing some medical supplies, bandages, etc., for cases of emergency.

Heating is one of the problems in the small schools where it is out of the question to install a furnace with forced draft. In the one-story building spread over considerable ground area the hot air gravity system is also practically impossible, the former type on account of installation, cost of operating, and the latter system on account of its unreliability of operation as well as the cost of keeping up fires and a janitor to look after it most of the time. The heaters that have been the most satisfactory are what is known as the jacketed furnaces with open top, placed and giving direct radiation in the room. The supply of fresh air is brought in from the outside under the building, passing up through a hole in the floor under the furnace proper, spreading around and over the hot surfaces as it moves upward. While the air is still warm it spreads over the upper portion

(*Continued on page 340*)

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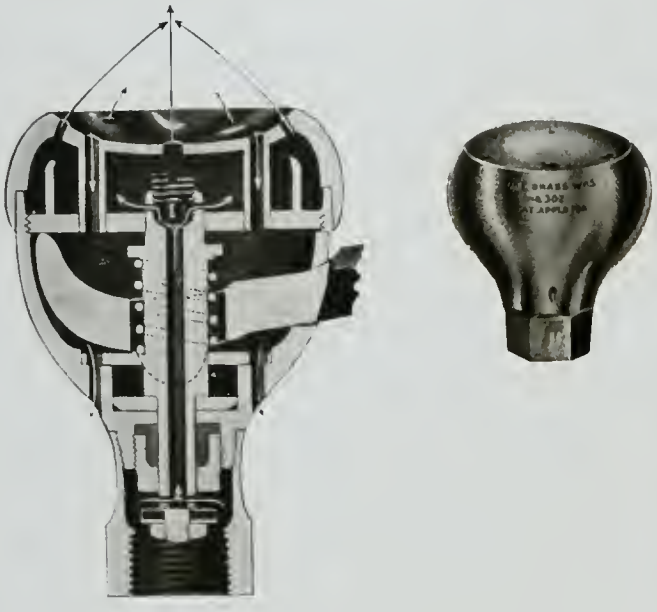

flowing upward, it is projected laterally into the main chamber, and must fill this chamber before it can flow through the openings. The back pressure being thus diffused, "spurting" is rendered impossible.

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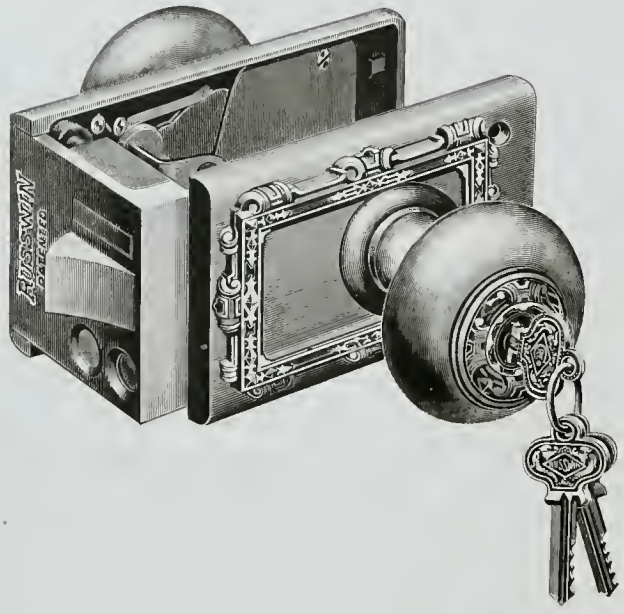

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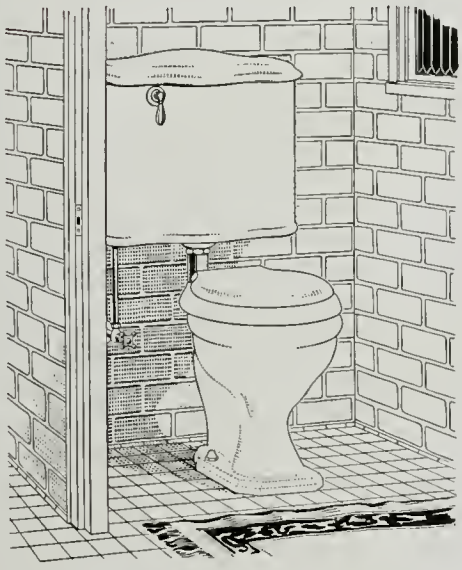

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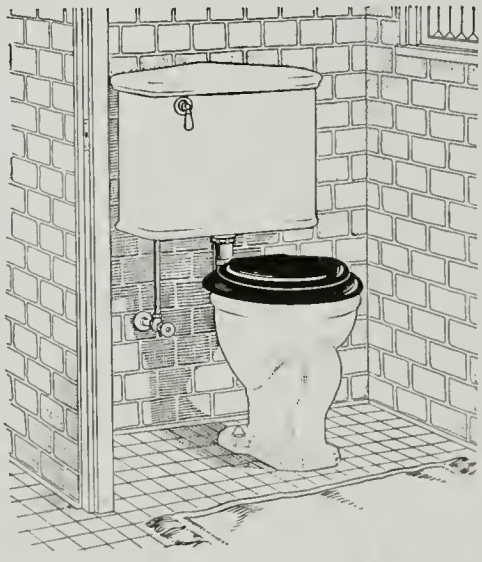

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